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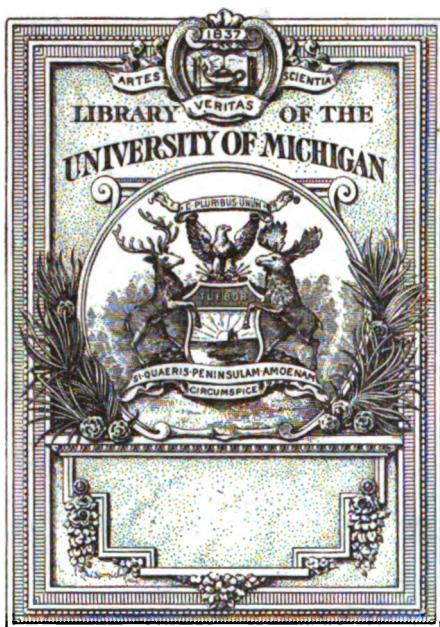
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A CLINICAL STUDY OF CEREBRAL LOCALIZATION, ILLUSTRATED BY SEVEN CASES.¹

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[*Reprinted from the American Journal of the Medical Sciences.*]

During the past fifteen years great progress has been made in the study of cerebral localization, and it seems probable that in the immediate future the whole cerebral cortex will be mapped out into small areas; each being associated with a definite and distinct mode of mental action, depending on the peripheral connections of the nerve fibres which terminate in that particular area. A scientific basis for the theory of cerebral localization was obtained by Meynert from a study of the comparative and finer anatomy of the brain; and the wonderful advances made in our knowledge of cerebral anatomy by the researches of Meynert, Gudden, Flechsig, and others, have contributed largely to the perfection of this theory. More important, however, than anatomy in contributing facts in support of the theory of cerebral localization, have been the results obtained from experimental physiology, and from observations of disease in the human brain. Indeed, so large already is the accumulation of reported cases of cerebral localization, that the theory may in a

¹ Read in part before the Medical Society of the County of Albany, Wednesday evenings, December 13 and 19, 1886.

general way be regarded as proved,¹ and it is desirable to publish only cases of such an unusual nature as will throw some light on the obscurity which still involves a great part of the subject. Such cases, it seems to me, are the following.

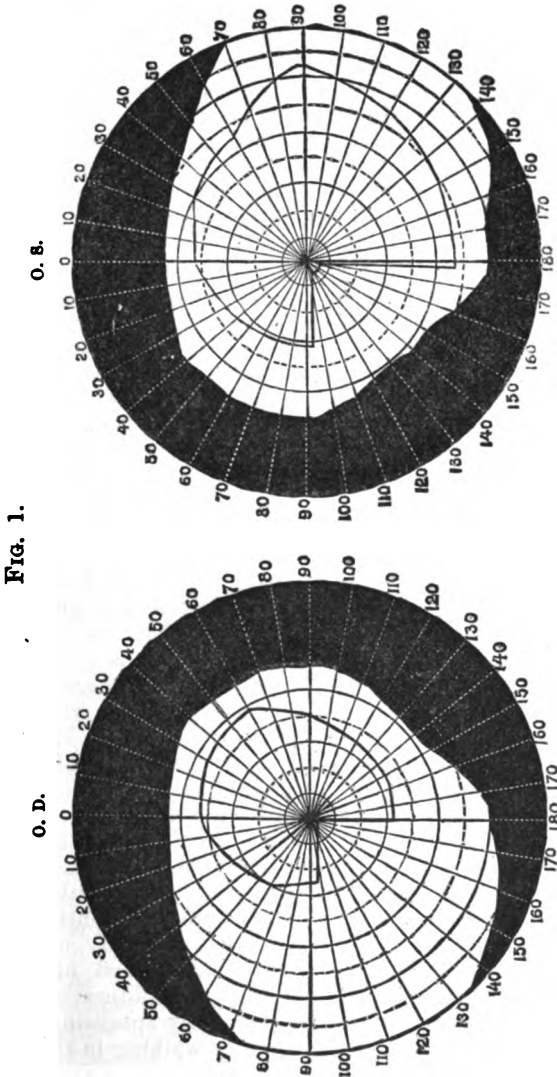
Of the seven cases here reported, one, Case II., was reported by Monakow in the *Archiv f. Psychiatrie*, the other cases are published now for the first time. I was present at the autopsies of Case I. and Case III., but not having seen the patients during life, I was obliged to obtain the histories in part from the families of the patients, and in part from their physicians, Drs. Boyd and Merrill in Case I., Drs. Curtis and Vander Veer in Case III., who have kindly permitted me to publish the cases.

CASE I.—*Defects in the fields of vision involving the lower left quadrant of each. Atrophy of the lower half of the right cuneus.*

May 20, 1886. H. M., male, æt. fifty-seven, married, of extremely nervous temperament. In 1869 he had a severe attack of double pneumonia, and during the year following he had slight attacks of vertigo while walking, which were attributed to weakness; with this exception he never suffered from any severe sickness. From 1877 until his death, he was troubled by slight deafness and by more or less roaring in the ears, which was especially constant and severe during the last two months of his life. In 1882 he had a large carbuncle on his neck, and after that time he seemed less vigorous than before. In 1884 he began to notice that when hurrying or walking up hill he was frequently compelled to stand still on account of precordial pain, and on June 23d of that year he had a very severe attack of pain in the cardiac region, extending into the left arm, and accompanied by extreme pallor, profuse perspiration, and the conviction that he was dying. On June 29th he got out of bed early in the morning, and while stooping to place a basket of silver outside of the bedroom door he complained of vertigo, seemed bewildered, and repeated over and over again questions as to the time of day, where he was, etc. He could not find the bed, although standing near it, and begged to be led to it. At eight o'clock he arose to dress, but could not remember which article of clothing he ought first to put on; he dared not cross the room, as all seemed dark before him, and "he was on the edge of an abyss." Every thing seemed changed to him, nothing natural; even his breakfast of clam broth when brought to him he called cucum-

¹ For a most excellent article on the localization of cortical lesions of the brain, containing an abstract of all the American cases and references to similar collections of foreign cases, see M. Allen Starr, *American Journal of the Medical Sciences*, vol. 87, pp. 65 and 866, and vol. 88, p. 114. Since Starr's article appeared a number of additional cases have been reported, notably a collection published by C. Günther in *Zeitschrift f. klin. Med.*, vol. 9, p. 1.

bers. After breakfast he slept soundly for several hours. He awoke with pain over his right eye, and during that day and the



next his pain continued and his face was flushed and hot, but he seemed to have little or no trouble with vision.

During the next week he went out on the street a little each day, and on July 5th he went to a large hotel in the country.

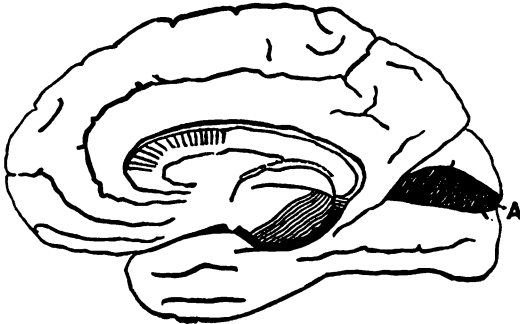
The fatigue of the journey and the confusion of the hotel seemed to bring back the mental confusion or disturbance of vision. At times he seemed puzzled; he could not tell how he had entered the dining-room, nor remember his table in it, nor find his bedroom alone. He was timid and conscious of his trouble, and would not be left alone for a moment lest he should lose his way. This confusion of vision or of mind gradually passed away, but his family noticed that he did not see a dish or plate which the waiter offered him on his left side, and he often told of narrow escapes that he had from being run over on the street. In November, 1884, he became very dejected, morose and melancholy, especially on religious subjects; at other times he became greatly excited. Early in December he was examined by Dr. Merrill, who found a normal reaction of pupils, normal appearance of fundus, vision and color perception perfect, a defect in the fields of vision involving almost the whole of the left lower and the peripheral portion of the left upper quadrants in each field. The defect was somewhat more extensive, especially as regards the upper quadrant, in the left field of vision than in the right. The fields of vision were carefully mapped out a number of times between December 3, 1884, and March, 1885, and always with the same result. (See Fig. 1.)

From this time the condition of the patient did not change materially. He continued to be very nervous and, at times, irritable and suspicious. He exhibited no paralysis of motion or sensation. He had little or no pain in the head, except that once, after writing much, which always was a great mental strain for him, he complained of pain behind the left ear, and said that he had with it strange hallucinations. His memory was weak in regard to names; he often called the same person by several names in the course of a conversation; while in other respects, as in recognizing faces, it was excellent. He slept but little, and in his sleep there was much twitching of his limbs. In 1885 he had another severe attack of angina pectoris, and for two weeks afterward he could walk only a short distance without bringing on a return of the pain. In February, 1886, he had his most severe attack of angina, lasting several hours, and from this attack until his death he was scarcely a day without pain in the precordia or in the arm. During the last month of his life he vomited often, the vomiting being apparently unconnected with any gastric derangement. He complained of increased dullness of vision and of greater angle of obliteration, and was much troubled by a new building near by appearing to be out of line. On May 7, 1886, while quietly walking in the street he sank gently to the ground and died.

Autopsy held thirteen days after death and after the body had been embalmed, which greatly altered the appearance of the tissues. Body was in a good state of preservation and the tissues cut like leather. Skull-cap and dura mater presented no abnormal appearance. Moderate atheroma of the cerebral arter-

ies. Slight dilatation of both lateral ventricles. At a point on the median surface of the right occipital lobe there was a complete atrophy of the cerebral convolutions, only a trace of them remaining as a delicate gray gelatinous fringe. This atrophy was strictly limited to the lower half of the cuneus; being bounded below by the calcarine fissure, in front by the parieto-occipital fissure, and above by a curved line which started from the parieto-occipital fissure and arching backward across the middle of the cuneus terminated at the posterior border of the median surface close to the calcarine fissure. The white matter

FIG. 2.



Median aspect of right hemisphere. (Ecker.)
A, point of atrophy.

under the point of atrophy was softened to a depth of about one-third of an inch. There was no deposit of pigment in the neighborhood. The corresponding point on the left occipital lobe showed no atrophy, nor did any of the other cerebral convolutions. Sections through the brain substance, the optic thalami, and the other ganglia at the base revealed nothing abnormal. The optic nerves and tracts showed no macroscopic atrophy nor degeneration. No microscopical examination was made.

The lesions found in the other organs were interstitial nephritis with cysts, moderate degree of atheroma of coronary arteries and commencement of aorta. The wall of the left ventricle of the heart was very thin, without presenting any macroscopic increase of connective tissue, at a point near the middle of the posterior surface. No valvular lesion. General adhesive pleuritis. Patches of old cicatricial tissue, some of them calcified, were found at the apices of both lungs.

In this case there is a lesion which destroys the lower half of the right cuneus, and there is one constant symptom which is present during the whole course of the disease; a blindness lim-

ited to the lower left quadrant of the field of vision of each eye. In the absence of any other cerebral lesion, the destruction of the lower half of the right optic nerve must be regarded as the cause of the blindness in the lower left quadrant of each field of vision. Such a case at this, in which a homonymous *quadrant* of the fields of vision is lost and there is found as cause of it a limited cortical atrophy, has never been reported; and in order to understand its significance it is necessary to call to mind some well-established facts regarding the anatomy of the optic fibres.

That the cortex of the occipital lobes is the point of final termination of the nerve fibres which start from the retinae and is the perceptive centre for sight may be regarded as definitely established, since the experiments of Munk¹ have been, in part at least, confirmed by numerous cases of disease in the human brain. It is now universally considered that in the optic chiasm there is a partial decussation of the optic fibres of such a nature that fibres from the outer half of each retina pass directly backward to the optic tract of the same side, while the fibres from the inner half of each retina decussate in the chiasm and pass to the optic tract of the opposite side. Each optic tract is made up, therefore, in part of fibres from the retina of the eye of the same side and in greater part of fibres from the retina of the opposite eye; the ratio of the crossed to the uncrossed bundle being as 3 to 2. Consequently, while a destructive lesion of an optic nerve causes a blindness of one eye, a lesion of the optic fibres at any point in their course between the optic chiasm and the cortex of the occipital lobe causes a blindness limited to one-half of the field of vision of each eye. Such a condition of things is called a lateral homonymous hemianopsia,² and it may be produced by a lesion, either of one optic tract, or of the pulvinar of one optic thalamus, or of the posterior part of one internal capsule, or of the optic fasciculus as it passes backward from the internal capsule to the occipital lobe, or of the white matter of the occipital lobe, or of the cortex of the occipital lobe. A number of cases have been reported in which the lesion was confined more or less accurately to one or the other of these parts.³

¹ Ueber die Functionen der Grosshirnrinde, Berlin, 1881.

² Hemianopsia means a loss of one-half of the field of vision, hemiplopia means a blindness of one-half of the retina; a right hemianopsia is, therefore, the same as a left hemiplopia.

³ For a summary of the literature see Seguin, *Journal of Nervous and Mental Diseases*, 1886, p. 1; Starr, *American Journal of the Medical Sciences*, 1884, i. p. 65; Marchand, *Archiv für Ophthal.*, 1882, ii. p. 62.

In all such cases when the lesion is situated on the left side of the brain the blindness is limited to the right half of each field of vision, and when the lesion is situated on the right side of the brain the blindness is limited to the left half of each field of vision. In many of the reported cases the hemianopsia is complicated by the presence of other nervous symptoms, which vary in character according to the situation of the lesion. When the lesion is confined either to the medullary substance or to the cortex of the occipital lobe, the symptom of hemianopsia is alone present and the reflex action of the pupil to light is normal. When the lesion involves the posterior part of the internal capsule the hemianopsia is associated with hemianæsthesia, and, if the lesion be extensive, with hemiplegia also. In this case also the reflex activity of the pupil to light is normal, whereas when the lesion is further down in the course of the optic fibres the reflex activity of the pupil to light is abolished or greatly impaired. When the lesion involves the pulvinar, the hemianopsia is frequently associated with hemianæsthesia and hemiplegia, because the lesion is usually not limited to the pulvinar, but involves also the internal capsule. When the lesion involves the optic tract, the hemianopsia is usually associated with hemiplegia and paralysis of some of the ocular muscles. Finally, the hemianopsia sometimes occurs associated with aphasia, alexia, word blindness, and more or less complete hemiplegia and hemianæsthesia as a result of extensive occlusion of the cerebral arteries, especially of the left middle cerebral. These points and many others in regard to hemianopsia are well stated in an excellent paper in the *Journal of Nervous and Mental Diseases*, 1886, p. 1, and also in the *Archives de Neurologie*, 1886, i. p. 176, by Dr. E. C. Seguin, which is the most valuable article on the subject of hemianopsia with which I am acquainted.

Although in case I. the blindness was, for the most part, limited to one-quarter of the field of vision, yet it must be classed for the present among the cases of hemianopsia or of hemiopic defect; because no class of tetartanopsia, to which it more properly belongs, is recognized. This case makes it probable that the fibres from the right upper quadrants of each retina terminate in the lower half of the right cuneus. It is true that not only the cortex of the lower half of the cuneus is completely atrophied, but also that the white matter immediately beneath it is the seat of softening. This focus of softening is, however, of

little depth, and affects principally the fibres running to the atrophied convolutions, and at most can involve only those fibres which run to the cortex in the immediate neighborhood of the atrophy. It may well be that this softening involving a few of the fibres running to the adjacent convolutions, causes the blindness in the peripheral portion of the left upper quadrant of each field of vision. So far, then, as this case shows any thing in regard to the central termination of the optic fibres, it proves that the fibres from the upper right quadrant of each retina terminate in the lower half of the right cuneus.

Five cases have already been reported in which hemianopsia has been due to a lesion of the cuneus and of the adjacent part of the median occipito-temporal convolution;¹ so that it may now be considered definitely settled that in this portion of the cortex of the occipital lobe the fibres from homonymous halves of the retina have their final termination. Case I. not only supports this view but it carries the localization a step further, inasmuch as it shows that the fibres from the right upper quadrant of each retina terminate in the lower half of the right cuneus. The fibres from the right lower quadrant of each retina must, therefore, terminate either in the upper half of the right cuneus or in the right median occipito-temporal convolution. The cases of Seguin, Haab, and Huguinin can only be explained by this latter view; while the cases of Féré and Monakow can be interpreted either way. From an inspection of the plates in Seguin's article, which represent the cortical lesions that have been found in cases of hemianopsia, we are forced to the conclusion that *the fibres from the right upper quadrant of each retina have their final termination in the lower half of the right cuneus, and the fibres from the right lower quadrant of each retina terminate in the adjacent part of the right median occipito-temporal convolution.* Of course, the same relationship holds good between the left half of each retina and the left cuneus and left median occipito-temporal convolution.

If it be true that the optic fibres terminate in such a small portion of the occipital cortex, the question presents itself,

¹ Huguinin and Haab, *Klin. Monatsbl. f. Augenheilk.*, 1882, S. 141; Féré, *Archives de Neurologie*, 1885, I. 229; Monakow, *Archiv f. Psychiat. u. Nervenkrankh.*, 1886, S. 151; Seguin, *Journ. Nerv. and Ment. Diseases*, 1886, p. 1. In a sixth case reported by Wilbrand (in Gräfe's *Archiv f. Ophthal.*, Bd. 31, S. 118), the lesion included this area, but also extended beyond it, and in two cases, the one reported by Curschmann, and the other by Westphal, *Archiv f. Psychiat. u. Nervenkrankh.*, Bd. 11, S. 822, the lesion involved this region, but also involved the white matter beneath it to a considerable depth.

What is the function of the remainder of the occipital cortex? That the cortex of the whole occipital lobe is the perceptive centre for sight, is shown not only by experiments on animals, but also by the fact that, in man, lesions of the occipital lobes, elsewhere than in the cuneus and median occipito temporal convolution, cause disturbances of vision. It might be thought that, inasmuch as in most, if not in all, uncomplicated cases of hemianopsia the central vision is intact, the very important fibres from the macula do not run to the cuneus or to the median occipito-temporal convolution, but have a wide connection with the rest of the occipital cortex. Such a supposition is immediately disproved by cases in which the lesion involved either an optic tract¹ or an entire occipital lobe,² and yet central vision was unimpaired; so that the fact that central vision is normal in cases of hemianopsia must be explained in some other way.³ The function, then, of the rest of the cortex of the occipital lobe must be sought in another direction, and in order to comprehend it, it is necessary to have clearly in mind the more important elements of a complete visual perception.

When the image of an external object is thrown upon the retina, nervous impulses are conducted along the optic fibres to their point of termination on the median surface of the occipital lobes, and give rise to a visual sensation and a very simple representation of the external object. The perception of the object is something different from this, and depends not only on nervous sensations originating in the retina, but also on feelings of innervation of the ocular muscles which are either taking place at the time of the perception, or by means of which in past time each point of the retina has become associated with a relative position in space. Another element in a complete visual perception is the binocular effect produced by a combination of the nervous impulses coming from each retina. The visual perception of an object is, therefore, distinct from, and much more

¹ Hirschberg, Virchow's Archiv, Bd. 65, S. 116.

² Baumgarten, Centralbl. f. d. med. Wiss., 1878, S. 369.

³ In order to explain the normal central vision found in cases of uncomplicated hemianopsia, Schweigger (Gräfe's Archiv f. Ophthal., Bd. 22, S. 376) thought it possible that fibres from each macula lutea might be connected with both cerebral hemispheres. Mauthner (Vorträge a. d. gesamte Gebiet d. Augenhellk., Bd. 1, S. 330) states, however, that since in cases of hemianopsia one-half of the macula lutea is intact, "upon this half of the macula images can be projected which are as sharply defined as ever, and, therefore, the persistence of normal central vision is not remarkable." Certainly, in such cases it requires but a very slight lateral movement of both eyes to throw the image on the healthy half of the macula.

complicated than, the visual sensation which is derived merely from the nervous impulses originating in the retina unassociated by education with other sensations. Such simple visual sensations occur alone only in babies or in blind persons to whom sight is suddenly restored; ordinarily the visual sensation is merged into and lost in the visual perception. Furthermore, every visual perception produces a permanent change in the occipital cortex, in consequence of which thereafter a memory of this perception is easily brought into consciousness. If the same object is seen again after a varying interval, the perception calls up more or less easily the memory of it, and the individual remembers that he has seen the same object before—he recognizes it. Every act of perception is almost inseparably connected with an act of recognition. It is very probable that the simple act of visual sensation may be associated with cellular activity in a different part of the occipital cortex from that accompanying the complicated acts of perception and recognition, and it is, therefore, quite possible that a lesion of the median surface of the occipital lobe destroying the point of termination of the optic fibres might cause complete blindness in the corresponding halves of the retinae, and that a lesion of the convex surface of the occipital lobe might prevent full visual perception and might destroy all the memories of things that had been seen, while simple visual sensation might be preserved.

In support of this view, and more especially on account of its great intrinsic interest, a very brief report is here introduced of a case of Monokow,¹ in which the symptoms were carefully observed, and in which the central nervous organs were examined with extreme care and exactness.

CASE II.—J. B., æt. seventy, an active, amiable, married man, with no hereditary taint. In 1878, he had several severe epistaxes, and soon afterward an apoplectic attack followed by a transient left hemiparesis, slight aphasia, hallucinations of sight and weakness of sight. These symptoms slowly disappeared and there remained only slight unsteadiness in walking, slight disturbance of sight, slight mental weakness and melancholia. In 1879, he had an epileptic attack, the convulsive movements being limited to the left side of the body, followed by a transient slight left hemiparesis, and the existing disturbance of vision (probably hemianopsia?) became more decided. He remained fairly well till January, 1882, when he complained that his sight

¹ Archiv f. Psychiat. u. Nervenkrankheiten, Bd. 16, S. 166.

was rapidly failing, although an ophthalmoscopic examination revealed nothing abnormal. In February, 1882, he had an apoplectic attack with transient left hemiparesis, blindness, hallucinations of sight, and disturbance of speech. Motility returned in a few days, but the disturbance of speech and an almost complete blindness remained. The patient, however, was no longer conscious of his blindness, and did not even speak of dimness of vision, of which he complained in January. He often said that he was stupid, old, etc., but never that he was blind, although he thought that he was in a cellar, and cried for light and fire. At other times he thought he was outside the house when he was really in it. During the last year of his life the condition of the patient was substantially as follows: There was no disturbance of sensibility. The hemiparesis was very slight. There was nothing abnormal about his speech, except its irrelevancy, due to his inability to understand spoken words. He heard noises and connected the proper associations with them. When, for example, the door was opened, he asked who had entered. When he was spoken to he was conscious of it, listened attentively, and made answer, but his answer showed that he had not at all understood what was said to him. He understood only two words, "father" and "adieu." The patient had complete left hemianopsia. On the other hand, he saw things on his right; he walked about the room without stumbling over the furniture; he found the door without difficulty and walked from one room into another; he found his bed and sat on it: but only when all these things were on his right side; to all things on his left side he was entirely blind. Although he saw things on his right side, more or less distinctly, yet he did not recognize them. He could not eat his food, though it was before him, and he was complaining of hunger; it was only when food was placed in his hand and he felt it that he ate it greedily. Rapid and threatening movements of the fist toward his eye did not move him in the least. He could not recognize his wife except by the sense of touch. Often he called for his wife when she was by his side, and she was able to quiet him only by caresses and petting, and not by her voice, nor by standing in front of him, nor on his right side. He took interest in things about him, had a good memory and correct judgment. He had hallucinations of sight and hearing, but had no delusions, and was cleanly in his habits. In November he became drowsy, the drowsiness deepened into coma, and he died on December 17, 1882. From the very accurate and minute report of the examination of the brain I mention only those lesions which interest us in this connection. In the right hemisphere was found almost a complete atrophy of the cuneus, the median occipito-temporal, and the descending occipital convolutions; and associated with this atrophy was a degeneration and atrophy of the optic fasciculus, the pulvinar, the external geniculate body, and the optic tract, all of

the right side and of both optic nerves. In the left hemisphere was found a great atrophy of the superior and middle temporal convolutions, and a softening of the white matter beneath all of these convolutions. The lesion of the right hemisphere was of older date than that of the left.

In this case the lesion of the right occipital lobe caused a left-sided hemianopsia, and it is one of the cases which prove that the optic fibres from the right half of each retina terminate in the right cuneus and right median occipito-temporal convolution. The descending degeneration connecting these atrophied convolutions with each optic nerve also speaks strongly in favor of this anatomical connection. The lesion of the left occipital lobe did not involve these convolutions, and the patient saw things with the left half of each retina—*i. e.*, objects on his right side. Although, to a certain extent, he had visual sensation of objects situated on his right side, yet he did not perceive them fully or recognize them, not even recognizing his food or his relatives. This failure of complete intelligent perception must have been due to the lesion on the convex surface of the left occipital lobe, and, therefore, the cortex of the convex surface of the occipital lobe seems to be essential to the complete perception and recognition of things seen, just as the cortex of the temporal lobe is essential for the recognition of spoken words.

From this case, then, it seems probable that the cuneus and the median occipito-temporal convolution is the portion of the occipital lobe where the optic fibres terminate, and is the point for simple visual sensation; while the cortex of the convex surface of the occipital lobe is the point where the visual perceptions are completely elaborated and are fully recognized. That atrophy of the cortex of the occipital lobe will produce a condition of consciousness in which things are seen to a certain extent, but are not completely recognized and understood, appears probable from those not very rare cases of progressive paralytic dementia in which, especially after apoplectiform attacks, the patient sees, but does not understand what he sees.¹ Such cases have also been reported as occurring in sane persons.² Very few cases have been reported in which the lesion has been strictly limited to the cortex on the convex surface of the occipital lobes, so that it is impossible yet to be certain whether such

¹ Fürstner, *Archiv für Psychiatrie und Nervenkrankheiten*, Bd. 8, S. 162, und Bd. 9, S. 90. Stenger, *Archiv für Psychiatrie und Nervenkrankheiten*, Bd. 13, S. 218.

² Wülbrand, *Ueber Hemianopsie*.

lesions cause only a loss of full perception and recognition while a certain amount of simple visual sensation remains, as in the case of Monokow; or whether there is a complete hemianopsia, as in a case (which I have not had an opportunity to read in the original) reported by Westphal,¹ but the former view seems the more probable. Whether, as in the case in both motor and sensory aphasia, the left occipital lobe is more important than the right, as a centre for full visual perception, cannot as yet be decided.

From the study of hemianopsia thus far made, the following deductions may be drawn:

1st. The optic fibres from the right upper quadrant of each retina terminate in the lower half of the right cuneus.

2d. The optic fibres from the right lower quadrant of each retina terminate in the adjacent part of the right median occipito-temporal convolution.

3d. The lower half of the cuneus and the adjacent part of the median occipito-temporal convolution is the point of termination of the optic fibres from the homonymous halves of the retina; the right half of each retina being represented in the right occipital lobe, and the left half in the left lobe.

4th. On the median surface of the occipital lobe take place those actions which are associated with simple visual sensations.

5th. On the convex surface of the (left?) occipital lobe take place those actions which are associated with complete visual perception and recognition.

Before dismissing Case I. from our consideration, there remain one or two points worthy of mention. The mental disturbance due to the failure of the patient to recognize familiar objects, which characterized the commencement of the attack, was due probably not so much to the lesion of the cuneus as to the disturbance in the circulation in the adjoining portions of the brain, especially in the rest of the cortex of the right occipital lobe, and to a less degree in the left occipital lobe also. The recurrence, seven or eight days later, of this failure to recognize objects may be explained either by his being placed in strange surroundings, or, more probably, by the circulatory disturbances taking place in the occipital lobe consequent upon the reactive inflammation surrounding the point of softening. The attacks of angina pectoris were probably due to the atrophy of the ven-

¹ *Charité Annalen*, 1883, p. 336.

tricular wall at or about the middle of its posterior surface, which atrophy, very likely, resembled the cortical atrophy in that it depended on embolism, or thrombosis.

Case II., besides being of great value in connection with the subject of hemianopsia, is also of interest in that it shows that an atrophy of the superior and middle temporal convolutions on the left side of the brain causes an inability to understand spoken words, although sounds are still heard. As a consequence of this inability to understand spoken words, the symptoms of sensory aphasia occur—i. e., the patient, not understanding what is said to him, makes irrelevant remarks, and if by any chance in speaking he uses the wrong word, he cannot correct himself by the sense of hearing. Many cases have now been reported in which the inability to understand spoken words and the consequent sensory aphasia have depended on a lesion of the superior, or of the superior and the middle temporal convolutions on the left side;¹ so that we may justly conclude that the memory of spoken words depends upon the integrity of the left superior temporal convolution, and that the full perception and recognition of spoken words are associated with actions taking place in that portion of the cortex. In what portion of the temporal lobe the fibres of the auditory nerve actually terminate is not known, but that they must do so at some point other than the superior and middle convolutions is evident from the fact that when the whole temporal lobe, or the bundle of fibres which runs from the internal capsule to the temporal lobe is destroyed, there results not merely inability to understand spoken words, but complete deafness.²

CASE III.—*Impairment of motion and sensation in right arm and leg; agraphia, alexia, and aphasia. Atrophy of lower three-quarters of posterior central convolution, and of the inferior parietal lobule of the left cerebral hemisphere.*

March 11, 1876. R. B., male, æt. sixty-six, married, lumber merchant. With the exception of an attack of pleurisy, when quite a young man, he has always enjoyed good health. He has been active and has devoted himself to business. On September 9, 1876, he was taken sick with typhoid fever, which lasted nearly six weeks, and was of moderate severity, his temperature never rising above 103° F. In the third week of this fever his

¹ Seppilli, *Revis. Speriment. d. freniatre, etc., etc.*, 1884, x. p. 94. Amidon, *New York Med. Journal*, vol. 41, pp. 113, 181.

² Wernicke und Friedländer, *Fortschritte d. Med.* 1883, No. 6; also the case of Huhn, cited in Wernicke's *Lehrbuch der Gehirnkrankheiten*, Bd. 2, S. 180.

family noticed one afternoon that he had suddenly lost his power of rational speech, and could not make himself understood. On the arrival of the attending physician it was found that the patient had a right hemiplegia and aphasia. For some time after this the patient was slightly delirious, and complained of some extra legs in bed with him, etc. After the fever ceased he remained much prostrated for a long time, and went down stairs for the first time in February, 1877. The paralysis of the right side of the body, especially of the arm, continued, and he had well-marked aphasia. Frequently at table he asked for a chicken when he wanted an egg, etc. He always knew in such cases that he had used the wrong word and recognized the right word as soon as he heard it.

On July 6, 1877, he was examined by Dr. Clymer, of New York, who found: "Right hemiplegia and aphasia. In right lower limb motor power fair, sensibility impaired and perverted. In right upper extremity motor power fair in arm and forearm, but motility of hand impaired; sensibility impaired and perverted, particularly in hand; sensations retained for some minutes after impact. There is a decided tendency toward contracture in the muscles of the right hand." Dr. Clymer also states in his letter that "there is probably an irritative process going on in the brain from the symptoms complained of." On October 25, 1877, Dr. Clymer examined him again and wrote: "I found him no worse and, I think, in some respects, better. He drops fewer words and uses his words more correctly. He has, he tells me, less confusion. He says he does not get strong, and there is no improvement in his right arm. His mouth, too, is badly cankered." On December 7, 1877, Dr. Clymer wrote: "Mr. B. has gained in the five weeks between his visits to me very much."

In the year 1878 the patient improved steadily. He walked without limping. He was able to use his right hand in cutting his food, in eating, etc., although it was awkward. He was able to dress himself and take care of himself, but whenever he could he used the left hand in preference to the right. But the difficulty with the right hand seemed to be awkwardness rather than weakness. He complained that his hand felt numb, and he kept rubbing and working it almost constantly. The aphasia almost entirely disappeared, so that he resumed business and travelled about a good deal and had very little difficulty in expressing himself, especially when he was interested in what he was saying and was a little excited. His principal trouble, and the one which did not improve at all, was that he could not spell, read or write. He could not spell the simplest word, such as "cat," from memory. There was a sign opposite his house on which was the name John Kingsbury. Many times a day he would look at the sign and spell out the name, J-o-h-n K-i-n-g-s-b-u-r-y. The John he almost always got correctly, but it was rather the exception when he read all the letters of Kingsbury without a mistake. After having spelled the name John by

reading it many times, he would shut his eyes and try in vain to spell from memory the name John, which he had just spelled by reading. He was entirely unable to read. He might read one, or perhaps two words correctly, but could go no further. He understood perfectly whatever was said to him. He never learned to write with his left hand. He could sign his name with his right hand if he went at it with a rush, and every thing went smoothly, but if by any chance he was stopped in the middle of the name he could not finish it, not knowing what letter came next. If the next letter were told him, he might, perhaps, finish the signature. He was able to write a little if some one told him the letters of most of the words. The following are fac-similes of parts of about the only two letters that he wrote during his sickness. He frequently complained of a "dull, bad feeling in his head." At times his mind seemed clear, but at other times he seemed dull and could not clearly comprehend some simple business transaction. At one time for several months he was very despondent, and thought that he had no money and must go to the poor-house. Before his sickness he was subject to sick-headaches, but they did not trouble him much during his sickness. Toward the end of the year 1878 he had a severe attack of gall-stones, which confined him to bed for several months; gall-stones being found in the feces. Subsequently he had several milder attacks. He remained pretty well till 1881, when his son died; after that time he was somewhat worse. In the summer of 1884, one very hot day, he probably had a slight sunstroke, and after that he was decidedly worse and steadily failed. His leg dragged in walking and his arm became almost useless. His mind became a little dull. He found great difficulty in expressing himself, and would work a whole day trying to frame a sentence before he could get it right and express his meaning. His articulation was distinct and he rarely showed any mental irritability.

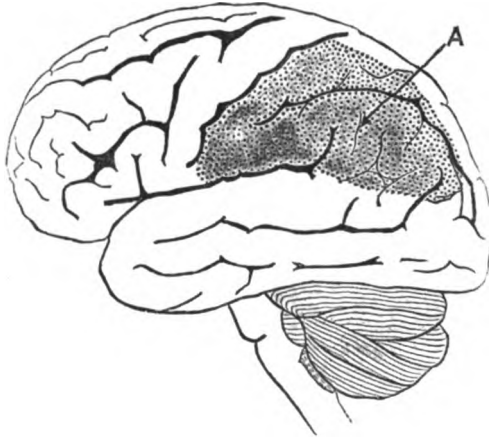
Autopsy held forty-one hours after death. The skull-cap was rather abnormally thick, and the dura mater, which presented a slightly yellowish tint at points, but was otherwise normal, was excessively adherent to it. The sinuses and vessels of the pia mater contained only a small quantity of blood. The pia mater presented numerous patches of opacity following the course of the vessels, and over the whole surface of the left hemisphere there was an increased amount of sub-arachnoid fluid. This effusion was especially marked at a point a little posterior to and above the posterior termination of the fissure of Sylvius, where it formed a large fluctuating bag which resembled a mass of jelly. There was a slight atrophy of all the convolutions of the left hemisphere, and beneath the point of greatest effusion, mentioned above, there was almost complete atrophy of the convolutions, which were represented by a thin gray fringe resembling a fold of pia mater. This atrophy involved the whole of the posterior central convolution, except a small portion of it

I went to your
 Office this afternoon
 to see you to
 wish me to go
 to Blucken Park
~~to~~ Hunting and
 driving as it is
 good weather
 for you

I cannot think
 how to make
 letters will
 I ever be able
 to understand
 or ever will
 you will see
 that I cannot
 compose well

near to the superior longitudinal fissure, the adjoining part of the superior parietal lobule, and the whole of the inferior parietal lobule, comprising the supramarginal convolution and almost

FIG. 3.



Outer aspect of left hemisphere. (Ecker.)

A, point of atrophy.

N. B.—It is to be remembered that these charts of Ecker are schematic. In this case, although the lesion is mapped out according to the convolutions affected, yet the lesion appears decidedly larger as represented on the chart than the actual lesion was on the surface of the brain.

the whole of the angular convolution. The fissure of Sylvius thus seemed to extend directly backward to the occipital lobe. The area of this atrophy corresponded with the area of distribution of the third (ascending parietal) and fourth (parieto-sphenoidal) branches of the middle cerebral or Sylvian artery. The white matter beneath the atrophied convolutions was neither softened nor atrophied.

The convolutions of the island of Reil, the left inferior frontal convolution, and the white matter immediately beneath it, were entirely normal, as were, also, the convolutions of the right hemisphere. The arteries at the base of the brain, and even some of the smaller cerebral arteries, presented an extreme degree of atheromatous degeneration. The posterior communicating arteries were obliterated and resembled threads. The ventricles of the brain were normal, and no abnormal appearance was found on sections through the cerebral substance and the ganglia at the base of the brain. No descending degeneration could be discovered on macroscopic examination. No microscopic examination of the nervous tissue was made.

The other lesions found were hypertrophy and fatty degeneration of the heart, thickening of mitral and aortic valves, ather-

oma of aorta, old double adhesive pleuritis, firm adhesions of colon to under surface of liver, enclosing the gall bladder, which presented the cicatrix of a healed perforation into the colon, and a moderate degree of interstitial nephritis in both kidneys.

The atrophy of the convolutions in this case and the attendant symptoms were evidently due to an embolism or thrombosis of the terminal portion of the left middle cerebral artery, which occurred in the third week of the typhoid fever.¹

In this case the principal symptoms are impairment of motion and sensation in right arm and leg, alexia, agraphia, and aphasia; and the principal convolutions involved in the atrophy are the posterior central, except a small portion of it near the longitudinal fissure, the supramarginal convolution, and the greater part of the angular convolution of the left cerebral hemisphere. The lesion differs greatly from that in case I., in that it is so extensive, and it is possible to explain the numerous symptoms which this extensive lesion produced only in the light of other cases of cerebral disease.

In the first place, the case is of interest in a negative way, inasmuch as it shows that this extensive lesion caused no disturbance of sight or hearing. From Case II. we learned that the memories of things seen depended on the integrity of the convex surface of the left occipital lobe, and that the memories of spoken words depended on the integrity of the left superior temporal convolution. Case III. shows that these centres cannot encroach to any extent on the parietal lobe, as it is sometimes claimed that they do. It is, also, one of the already somewhat numerous cases which show that the cortical centre for sight is not situated in the angular convolution, as Ferrier concluded it was from his experiments on apes.

The most striking and persistent symptom in this case is the inability of the patient to read or write, or the alexia and agraphia, as these disturbances are respectively called. Neither the alexia nor the agraphia was complete. The patient could read single letters and even short words with difficulty, but he could not spell the word with his eyes shut immediately after having read it. He could not store up the memory of the word that he had just seen, although he could store up the memory of the same word when he heard it spoken. He could not remem-

¹ Cases of recovery from probable occlusion of the middle cerebral artery occurring in the course of typhoid fever have been reported by Vulpius in the *Revue de Médecine*, 1884, p. 163; and Kühn in *Deutsches Archiv f. klin. Med.*, Bd. 34, S. 56.

ber the appearance of words. When he saw a word in reading he had no already existing memory with which to compare it, and he was unable, therefore, to recognize it. When he tried to write he had no memory of the appearance of the letter or word which he wished to write, and, hence, he was unable to reproduce it on paper; as he said in one of the only two letters which he wrote during his illness, "I cannot think how to make letters." The agraphia did not depend on the motor disturbance of the right hand, for in his letter of March 20 the letters were written legibly enough, and subsequently the awkwardness of his arm became much less.

When we consider the act of reading, and especially when we consider how a child first learns to read, it seems natural that the cortical centre for reading, or that portion of the cortex on the functional activity of which depends the memory of the appearance of written or printed words, should lie near the auditory centre and especially near the visual centre; and such is indeed the case. For in cases of alexia and agraphia in which an autopsy has been made, the lesion has involved the angular convolution.¹ In this case, therefore, we must consider the cause of the alexia and agraphia to be the atrophy of the angular convolution of the left hemisphere, and since this atrophy did not involve the entire convolution, the alexia and agraphia were not complete, although nearly so.

Another constant symptom in this case is a disturbance in the motility or an awkwardness of the right arm, and, to a less extent, of the right leg. The lesion corresponding to this disturbance must lie in the so-called motor zone, which is the portion of the cerebral cortex that has been studied with special care. As a result of extended experimental and clinical study, it may be considered established that the two central convolutions and the adjacent part of the cortex are the cortical centres for movements of the opposite side of the body. The centre for the leg includes the paracentral lobule, the upper third of the two central convolutions, and the greater part of the superior parietal lobule. The centre for the arm includes the posterior part of the superior frontal convolution, and the anterior part of the inferior parietal lobule. The centre for the face includes the lower part of the central convolutions, especially the anterior

¹ M. Allen Starr, *American Journal of the Medical Sciences*, vol. 87, p. 389. A. B. Ball, *Archives of Medicine*, 1881, vol. 5, p. 136.

one. These different centres are not sharply defined from each other; the one merges into the other; and it is rare to find a cortical lesion so situated and so small that it produces a paresis or paralysis of only one extremity or of only one-half of the face. In Case III. the lesion involves a large part of the centre for the arm, and a small part of the centre for the leg, and consequently there is much impairment of the motility of the arm and a slight impairment of that of the leg. There is no distinct statement concerning the face made in the history, although the lesion seems to involve a portion of the centre for the face.

When we examine the motor disturbance of the arm more closely, we find that it consisted in awkwardness rather than weakness, and that it was confined more particularly to the hand and fingers, or to that part of the arm with which those fine and delicate movements are executed which are the result of much education. Complicated movements which he had formerly executed easily, the patient executed with difficulty. When he tried to write, he said: "I cannot think how to make the letters," and in the same way, when he tried to use his hand in other acts, he probably could not think how to make the movement. He had lost his skill in using his hand. He had forgotten the necessary feelings of muscular innervation; the memory of former innervation feelings was destroyed. In order to understand this clearly it must be remembered that one of the most important functions of the cerebral cortex is the reproduction of former perceptions in the form of memories. The cortex of the so-called motor centres is essential for the reproduction of memories of muscular innervation for movements which have previously been performed, and which can be performed again easily and readily only by the aid of the corresponding innervation memories. These memories of muscular innervation have been originally acquired, in part at least, through reflex acts.¹

The lesion in Case III. involved only the posterior half of the centre for the arm, and the symptoms produced were those of awkwardness rather than weakness. From a consideration of the reported cases of lesions of the motor centres, it seems that lesions situated in front of the fissure of Rolando cause a more complete paralysis,² and are more often associated with descend-

¹ Meynert, *Psychiatry*, transl. by Sachs, vol. 1, p. 160.

² Mickle, *Journal of Mental Sciences*, April, 1886; Hirschfelder, *Pacific Med. and Surg. Journ.*, Oct., 1881; Spitz, *Deutsche med. Wochenschr.*, April, 1883; Prévost and Cotard, *Obs. 15 in Études physiol. et pathol. sur le ramoll. Cérébrale*, Paris, 1886.

ing degeneration, than lesions situated behind the fissure of Rolando, which produce rather a paresis or awkwardness.¹ It seems probable, then, that the nerve fibres for the arm and leg have their origin in that part of their respective centres which is situated in front of the fissure of Rolando (in the case of the arm the fibres probably start from the base of the superior frontal convolution), while that portion of the centre situated behind the fissure of Rolando is essential to the production of the memories of innervation feelings.

The aphasia which was present in the early part of this case, but which later almost completely disappeared, was not due to any lesion of the left inferior frontal convolution, which is the portion of the cortex now generally regarded as essential to the production of memories of the innervation processes necessary to the pronunciation of words and hence of speech. This is one of the not very rare cases of aphasia due to a lesion which causes an interruption in the conduction along the association fibres which connect the left inferior frontal convolution either with the temporal lobe or with the angular convolution—i. e., with the cortical centres for the memory of either spoken or written words. A number of cases of aphasia dependent on lesion of the supramarginal convolution or of the white matter just below it have been published.² Since in this case the aphasia was temporary, it was probably due to some temporary cause, as, for instance, anæmia of the conducting fibres in the white matter beneath the supramarginal convolution, which anæmia gradually disappeared as the collateral circulation became more or less perfect. It is quite possible, too, that the aphasia was in part due to the loss of memory of the appearance of words. In the case of Cornil, cited by Wernicke,³ a small lesion of the supramarginal convolution caused not only aphasia, but also hemianæsthesia; so that it might be inferred that the impairment of sensibility noted by Dr. Clymer in Case III. was due to the lesion of the supramarginal convolution. Such an inference, however, is unnecessary, for it is now well known that lesion of the so-called motor zone causes loss of sensibility, although it is not yet settled whether the cortical centre for cutaneous and

¹ J. Hughlings Jackson, *Brain*, Oct., 1882; H. B. Sands, *Med. News*, April, 1883; Wm. Carson, *Am. Practitioner*, vol. xv., p. 217; Vetter, *Deutsches Archiv f. klin. Med.*, Bd. 22, p. 421.

² Broadbent, *Medico-Chirurgical Trans.*, vols. lv. and lxi.; S. West, *Brit. Med. Journ.*, 1885, p. 1242; Cornil, *Gaz. Méd.*, 1864, p. 584.

³ *Lehrbuch der Gehirnkrankheiten*, vol. II., p. 176.

muscular sensibility is limited to the motor zone or whether it includes also the parietal lobe.

From the above considerations it is evident that although in Case III. the lesion is very extensive, yet it confirms the following deductions which can be drawn from reported cases in which the lesion was less extensive:

1st. In the anterior part of the cortical centre for the arm originate the nerve fibres for the arm, and lesions of this part cause absolute paralysis.

2d. In the posterior part of the cortical centre for the arm take place those cellular actions which are essential to the production of memories of muscular innervation, and lesions of this part cause awkward, uneducated movements.

3d. The cortical centre for muscular and cutaneous sensibility extends over the motor zone and probably over the parietal lobe also.

4th. The left angular convolution is essential for the memory of the appearance of words, and lesions of it cause alexia and agraphia.

The subject of aphasia will be considered later.

In Case III. the lesion affected principally the cortical centre for the arm, while in the following case the cortical centre for the leg was alone affected.

CASE IV.—*Left hemiparesis. Convulsions limited to the left side of the body, always commencing in the left leg. Endothelioma pressing on right superior parietal lobule.*

M. C., female, æt. forty-two, married, a servant, entered St. Peter's Hospital June 7, 1883. Family history unknown. Patient has never been very strong, but has worked hard. Four and a half years ago she slipped and fell on the sidewalk, striking on the back of her head. About three and a half years ago she had the first of a series of attacks of which she had about a half a dozen in all. These fully developed attacks commence with a tingling and twitching of the left foot, which gradually extend up the leg and then commence in the left arm; next the tingling sensation creeps up the back to the left side of the head, and the head commences to twitch; after the head has continued twitching for from ten to fifteen minutes, and while the whole left side of the body is twitching she loses consciousness and remains unconscious for a quarter of an hour or longer; while unconscious she frequently has involuntary micturition. The right side of the body has never taken part in these convulsions. She has never bitten her tongue, and she has never had a convulsion which did not commence in the left foot. Besides

these half dozen fully developed attacks she has had more frequently attacks in which she feels a pain in the left heel, the left great toe works up and down for a long time, and sometimes the muscles of the leg twitch, but the twitching goes no further and the attack passes off. Patient also complains that the left arm and leg are much weaker than the right and that she has much darting pain in the left leg, arm, face and left side of head. She often feels as if a strap were drawn firmly about portions of the left arm and leg, and at times it feels as if her toes had fallen off; while it feels at other times as if her teeth had fallen out. These latter sensations are most marked immediately after an attack of convulsions. She says that her eyes are so weak that she cannot read and that she has flashes of light before her eyes which make her dizzy. She complains of fullness and pain in vertex of head, and thinks that at times she is not in her right mind.

On entrance into the hospital patient seems weak and anæmic. An examination of the thorax and abdomen reveals nothing abnormal. Sensibility intact over both sides of face, both arms and right leg. Sensibility in left foot and leg is somewhat blunted to tactile impressions, but not to painful ones. Left leg is much weaker than right, so that she is unable to walk without a cane. Left arm is weaker than right. Grasp of right hand 50, of left 40, as registered on the outer circle of Mathieu dynamometer. Ankle clonus and exaggerated knee-jerk on both sides, especially on the left. No exaggeration of tendon reflexes in arms. Pupils equal and react to light. An ophthalmoscopic examination by Dr. Merrill reveals a typical specimen of choked disk. In both eyes the veins are tortuous, the disk reddened and oedematous. In the left eye there is rather less oedema, but there is a patch of exudation in the disk and in the adjoining part of the retina. No tenderness on percussion over any part of the skull.

December 1, 1883. Since entrance into the hospital, the condition of the patient has not changed materially. She had ten fully developed unilateral convulsions between time of entrance and August 21, 1883, since which time she has had no convulsion, although she has had some abortive attacks. The unilateral convulsions which she had in the hospital have all commenced in the left foot and gradually extend over the whole left side of the body, the right never being affected. The convulsive movements are clonic contractions of the muscles of left leg, left arm, left side of neck, left side of face, left side of tongue, and left eyelid and eyeball. Consciousness persists during the earlier part of the attack, but soon becomes more or less completely lost. Each attack can be promptly arrested by the inhalation of ether, and when so arrested does not return when the ether is withdrawn. After these attacks it has been noticed that the left side of the body is decidedly weaker than before and the

strength returns slowly. Besides these attacks she has attacks of convulsions limited to the left leg. In addition to these convulsive attacks she has numerous attacks of a curious nature in which all mental action seems to be abolished. She will sit as if in a trance, perfectly motionless, unable to answer any question or to do any thing that she is told, for a space varying from a few minutes to an hour or more, when she will suddenly come to herself and be entirely natural again. When she comes to herself she sometimes has no memory of any thing that has happened, while at other times she has a pretty clear idea of all that took place in the room while she was in the fit. At other times, while in such a fit and incapable of answering questions, etc., she keeps repeating over and over the phrase, "Lord, have mercy on me!" and in all her fits she never uses any other phrase than "Lord, have mercy on me!" She has had much pain at times in left side, especially in left side of skull, and has had several attacks of nausea and vomiting.

August 1, 1884. Has been more comfortable during the past eight months. Has not had more than half a dozen unilateral convulsions, and has had less pain in left side of head. Feels a little stronger and can walk a little better with the aid of a cane. No decided change is found on physical examination except that there is now at times decided tenderness on percussing the skull over the upper posterior part of the right parietal bone, and that there is a slight but evident left facial paresis, which is especially well marked after a convulsive attack. The remedies which seem to benefit her the most are small doses of bromide of potassium or of chloral.

October 30. Slowly failing during the past few days. To-day lies in a semi-comatose state, with the head, but not the eyes, turned toward the right. She answers questions in monosyllables. Tongue protruded fairly straight. She cannot move either left arm or leg, which are flexed and moderately rigid.

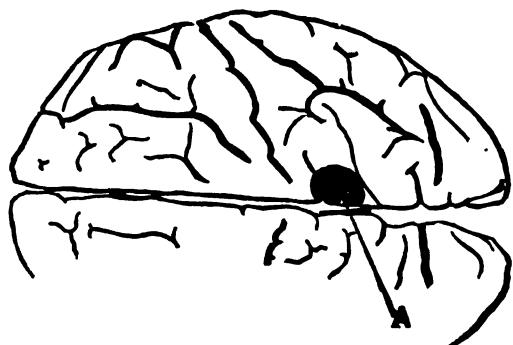
November 1. This evening the pupil of the right eye was contracted and did not respond to light, while the pupil of the left eye was dilated and did respond to light. Temperature $106\frac{1}{2}^{\circ}$ F. All these symptoms disappeared in a few hours and did not recur.

3d. Entirely comatose. Left side of body completely relaxed. Some resistance offered to passive motion on right side. Eyes examined by Dr. Merrill, with the following results: Outlines of nerves are indistinct, arteries small; both arteries and veins are very tortuous. Retinæ in the neighborhood of the nerves and extending well out toward the periphery are œdematous, and present an unusually opaque appearance. The appearance of both eyes is much alike, except that in the left eye the arteries and veins are much smaller and more tortuous.

Patient died to-day. *Autopsy* held five hours after death. Skull-cap unusually dense and not symmetrical, being unusually hollowed out at a point near the right parietal eminence. Dura

mater not so adherent to skull-cap as usual; inner surface of dura mater normal. Pia mater normal except for much congestion of both the larger and smaller veins. Base of brain normal. Cerebral convolutions are unusually flattened. Lying close against the superior longitudinal sinus and just posterior to the upper extremity of the posterior central convolution on the right side is a hard ovoid tumor, measuring one and one-half inches in its longer, and one and one-quarter inches in its shorter diame-

FIG. 4.



Superior surface of right hemisphere, after Ecker.
A, depression caused by tumor.

ter. The tumor pressed on the cerebral substance, causing a rather deep concavity in the most anterior part of the right superior parietal lobule on the very edge of the superior longitudinal fissure. The tumor is firmly adherent to the dura mater, and around its periphery the dura mater, the pia mater, and the cerebral cortex are all firmly adherent to the tumor and to each other. Just beneath the tumor the cerebral substance is slightly softened. The left lateral ventricle is dilated in all its parts, while the right lateral ventricle is rather smaller than normal, and its posterior horn is almost completely obliterated. Sections through the brain and spinal cord show no other lesions.

On microscopical examination the tumor was found to be an endothelioma. It presented a well-marked alveolar structure, and the cells were flat and had a concentric arrangement. No descending degeneration could be found either in the spinal cord or in the pyramidal tract at the base of the brain.

In the first three cases the lesion was a cerebral atrophy which simply put certain portions of the brain out of action. In Case IV., however, the lesion is a tumor which, in its growth, pressed upon and irritated the cerebral cortex and the cerebral meninges, and consequently in this case we get for the first time symptoms

of cerebral irritation—i. e., nausea and vomiting, and pain and convulsions limited to the opposite side of the body. In this case the tumor never actually destroyed the cerebral cortex, and, therefore, the symptoms of irritation were never completely replaced by those of paralysis, although toward the end of the patient's life the convulsions became rarer and the hemiparesis became more decided.

The principal symptoms in the case were the pain, the convulsive attacks, and the attacks in which the patient was unable to answer questions or to perform any other voluntary action. It has long been known that the nearer a tumor is to the surface of the cerebral hemispheres the greater is the pain that it causes, and this tumor growing in the meninges caused paroxysmal attacks of intense pain throughout the left side of the body, and was especially constant and severe over the whole left side of the head. The distribution of the pain is difficult of explanation. The most reasonable explanation is that it was due to irritation of the cortical termination of the sensory nerves of the left side of the body, especially of the fifth nerve; and yet, according to our present views of cerebral localization, the fibres from the fifth nerve terminate in the lower rather than in the upper part of the central convolutions. It was only toward the end of life that there were pain and tenderness over the seat of the tumor.

Unilateral convulsions have been very frequently noticed in cases of tumors and other irritative lesions of the cerebral cortex. Such convulsions are sometimes called cortical epilepsy or Jacksonian epilepsy, after J. Hughlings Jackson, who has long given them especial attention and study, and who insists on the importance of temporary paresis following the convulsion and limited to the muscles taking part in the convulsion, which temporary paresis was well marked in case IV. It is customary in these cases for the convulsion to commence in that part of the body which is connected with that portion of the cortex in which the lesion is situated, and, accordingly, in this case the convulsive movements always began in the left foot; the tumor lying in the cortical centre for the leg. In many cases the convulsion, although commencing on one side, soon becomes general and is associated with loss of consciousness, thus closely simulating epilepsy. It is such cases which have given much support to the theory of the cortical origin of epilepsy; although true

epilepsy is entirely distinct from such epileptiform convulsions dependent on gross disease of the brain. In Case IV. the convulsions were never general, and the loss of consciousness was often incomplete.

Besides the unilateral convulsions, the patient had another form of attack which is very interesting, and which has never to my knowledge been noticed in cases of cerebral tumor. In the attacks of this kind, consciousness, although obscured, was rarely or never completely lost. The patient was in a kind of trance; she knew what was going on about her and tried to answer questions and to do what she was told, but there seemed to be an inhibition put upon all action. The most she could do in the milder attacks was to say, "Lord, have mercy on me." These attacks in many respects resembled the attacks of *petit mal* of epileptics. We know that from the motor area of the cortex two kinds of impulses originate and pass down along the pyramidal tract to the sub-cortical centres. One kind of these impulses sets the sub-cortical centres in activity and causes movements; the other kind stops the activity of the sub-cortical centres and inhibits movement. Destructive lesions, either of the motor area in the cortex or of the pyramidal tract, destroy voluntary movements, and, at the same time, by destroying inhibition, increase reflex movements. In Case IV. it seems that the irritation of the tumor caused at one time a discharge of motor impulses which set the sub-cortical centres into activity and produced the convulsive movements, and at another time caused a discharge of inhibitory impulses which repressed all activity of the sub-cortical centres and prevented movement. It seems, then, as though the two contradictory forms of activity which this portion of the cortex manifests in health, and which causes respectively movement and inhibition, were both reproduced in an abnormal discharging manner by the irritation of the growing tumor.

Besides these symptoms, there was in this case a left hemiparesis, which was always more decided after a convulsion, and which was due in part, perhaps, to the left-sided convulsions, but certainly in greater part to the direct pressure of the tumor upon the cortex. Although the action was confined to the cortical centre for the leg, yet the paresis was not confined to the leg, but affected also the arm and face to a less degree. This would indicate that in each cortical motor centre the face, arm and leg

are all represented to a varying degree, and that there is no sharp line to be drawn between the centres. This and many other cases can be better explained in this way than by the supposition of transmitted pressure. Certainly it is very rare to find a cortical lesion so small that it causes disturbance in only one member.

In all the cases so far reported in this article the lesion has been confined to the cortex of the posterior part of the brain, and has in no instance extended in front of the fissure of Rolando. I have not had any case in which the cortex of the frontal lobe was involved, but I will report briefly three cases in which the lesion involved the white matter of the frontal lobe.

CASE V.—No symptoms, coma; tumor of frontal lobe.

W. McP., male, æt. forty-four, widower. Always healthy. Infected with syphilis eight years ago. During the past year and a half he has been troubled by a varicose vein in his leg, which has ruptured four times, causing a great loss of blood each time. Otherwise he has felt well, except that he has felt weak of late, on which account he entered the hospital. On entrance he exhibited anæmia and general weakness, which were attributed to the excessive loss of blood. No paralysis of motion or sensation and no aphasia could be discovered. Eyes were not examined. Four days later he became comatose and the next day he died. At the autopsy a tumor as large as a small hen's egg was found in the lower part of the right frontal lobe near its middle, surrounded by a narrow zone of yellow softening. Tumor was dense, mahogany-colored on section, subdivided by indistinct septa and contained several distinct hemorrhages.

CASE VI.—Convulsions, aphasia, somnolence, coma, death; abscess just anterior to left corpus striatum.

H. T., male, æt. forty-three, married. Enjoyed good health until one day when, without any warning, he had a severe convulsion followed by unconsciousness for about an hour, when he had a second convulsion, which was also followed by unconsciousness for about an hour, after which he recognized persons about him and appeared well. During the next fortnight he went out, but seemed averse to bodily or mental exertion. He grew more and more listless and dispirited. He complained of paroxysmal pain in his left eye and darting through his temples. There was no paralysis of any sort, but there was a slight degree of aphasia. His pulse did not vary much from 80. He steadily grew more and more drowsy, became comatose, and died just one month after his first convulsion. At the autopsy two encapsulated abscesses, each the size of a small hen's egg, and communicating with each other, were found a little in front of the left corpus striatum, the top of the upper abscess being on a

level with the floor of the lateral ventricle. The cerebral substance in the immediate neighborhood of the abscess was the seat of a softening which involved the anterior part of the corpus striatum and the convolutions of the island of Reil.

CASE VII.—*Convulsions, aphasia, paralysis of leg, somnolence, death; tumor involving the whole of the medullary substance of the left frontal lobe.*

M. D., female, æt. thirty-nine, married, always enjoyed good health till one day when, without known cause, she was seized with three epileptoid convulsions in succession, after which she remained comatose for a few hours, and then seemed to be perfectly well again. These attacks occurred on the same day that her menstrual discharge ceased. One month later, on the last day of her menstruation, she had another set of altogether similar convulsions, and still again, one month later, the attacks recurred. Just before the termination of the next menstruation twenty leeches were applied to the inside of the thighs, and a brisk cathartic was administered, with the result that the convulsions did not appear till two weeks later. After this they continued to appear at irregular intervals, which were seldom less than four weeks. Except for the convulsions she continued in fair health for five months, when she began to complain of paroxysmal pain in both temples, especially in the left one, and became listless and dispirited, and had also severe attacks of vomiting. Three months later the right leg became so weak that she could not walk, and her eyesight began to fail. Eyes were not examined ophthalmoscopically. She became more and more listless and developed well-marked aphasia. Ten months after her first convulsion she had a severe convulsion, after which she remained unconscious, and vomited constantly. The right side remained nearly motionless, while the left arm and leg were in continual motion. On the morning of the next day she died. At the autopsy a gelatinous tumor was found occupying the place of the whole of the medullary substance of the left anterior lobe. The tumor cut tough and gave the sensation as though the scalpel was drawn over wool. It reached to within half an inch of the surface of the hemisphere. The cerebral substance around was softened, the corpus striatum being involved in the softening.

Case V. shows that a large tumor may exist in the frontal lobe without giving rise to any symptom until it causes coma and death. Numerous cases are on record which prove the same thing, and it is now generally accepted that lesions of the frontal lobe may cause no characteristic symptoms (except, perhaps, an ill-defined change in the character and disposition of the patient) unless they are so far back that they involve the motor centres, or unless they involve the posterior part of the left inferior

frontal convolution, in which case they produce aphasia. It is well known that in the left inferior frontal convolution take place those cellular actions which are essential to the production of the innervation feelings necessary for speech, and lesions of this convolution produce motor aphasia—i. e., the more or less complete inability to speak, just as lesions of the left superior temporal convolution cause sensory aphasia—i. e., the inability to understand spoken words, and hence irrelevant speech. In Case VI. the softening about the abscess involved either the left inferior frontal convolution or the fibres coming from it, and produced a slight degree of aphasia; while the extensive lesion in Case VII. involved not only the fibres from the inferior frontal convolution, but also some of those from the central convolutions, and produced not only well-marked aphasia, but also paralysis of the right leg.

Cases VI. and VII. are good examples of general convulsions depending on tumors of the anterior lobes, just as case IV. was a good example of localized convulsions dependent on a tumor located in the motor region of the cortex. The fact that the cessation of menstruation acted as an exciting cause for the convulsion in Case VII., and that a free bleeding at that time delayed the appearance of the convulsion, is very interesting.

From this study of cerebral localization the following conclusions may be drawn:

1st. The greater part of the cerebral cortex can be divided into small areas, each of which is functionally associated with a definite mode of mental action, and is consequently called the cortical centre for that action.

2d. The cortical centres connected with the sensory nerves are situated in the posterior half of the cerebral cortex, including the temporal lobe; and the cortical centres connected with the motor nerves are situated in the middle portion of the cerebral cortex and in the posterior part of the cortex of the anterior lobe.

3d. Each sensory cortical centre probably consists of two parts; a smaller one in which the peripheral nerve has its final termination and in which take place those molecular changes which correspond to simple sensation; and a larger one in which take place those molecular changes which correspond to the mental processes of memory, judgment, and comparison, which together constitute complete perception and recognition.

4th. Each motor cortical centre probably consists of two parts: a smaller one in which the peripheral motor nerve has its origin, and in which take place those molecular changes which correspond to the action of the will in originating voluntary movements; and a larger part in which take place those molecular changes which correspond to the memories of coöordinated muscular innervation which are factors in the productions of voluntary movements.

5th. The optic fibres from the right upper quadrant of each retina terminate in the lower half of the right cuneus. (See Case I.)

6th. The optic fibres from the right lower quadrant of each retina terminate in the adjacent part of the right median occipito-temporal convolution. (See remarks on Case I.)

7th. The lower half of the cuneus and the adjacent part of the median occipito-temporal convolution is the point of termination of the optic fibres from homonymous halves of the retinae; the right half of each retina being represented in the right occipital lobe and the left half in the left lobe. (See remarks on Case I.)

8th. Functional activity of the cortex of the median surface of the occipital lobe is necessary for simple visual sensation. (See remarks on Case II.)

9th. Functional activity of the cortex of the convex surface of the left occipital lobe is necessary for full visual perception and recognition and for the production of visual memories. (See remarks on Case II.)

10th. The temporal lobe is the cortical centre for hearing, and complete destruction of a temporal lobe or of the auditory fibres running to it causes complete deafness of the opposite ear. (See remarks on Case II.)

11th. Functional activity of the cortex of the left superior temporal convolution is necessary for the perception and recognition of spoken words and for the production of the memory of these words; lesions of this part causing inability to understand spoken words, and sensory aphasia. (See remarks on Case II.)

12th. Functional activity of the cortex of the left angular convolution is necessary for the production of memories of the appearance of written or printed words; lesions of it causing alexia and agraphia. (See Case III.)

13th. Only in virtue of the fact that on its functional activity depends the production of the memories of the appearance of written or printed words can the angular convolution be considered as forming part of the visual centre. It does not constitute the visual centre, as Ferrier claims. (See remarks on Case III.)

14th. The cortical centre for the leg includes the paracental lobule, the upper third of the two central convolutions, and the greater part of the superior parietal lobule. (See Case IV. and remarks on Case III.)

15th. The cortical centre for the arm includes the posterior part of the superior frontal convolution, the middle third of the two central convolutions, and the anterior part of the inferior parietal lobule. (See Case III. and the remarks on it.)

16th. The cortical centre for the face includes the lower third of the two central convolutions, especially the anterior one. (See remarks on case III.)

17th. In the anterior part of the cortical centre for the arm originate the nerve fibres for the arm, and lesions of this part cause absolute paralysis of the arm. The same thing is probably true in the case of the cortical centres for the leg and face. (See remarks on Case III.)

18th. In the posterior part of the cortical centre for the arm take place those molecular changes which are necessary for the production of memories of coördinated muscular innervation. The same thing is probably true in the case of the cortical centres for the leg and face. (See Case III. and the remarks on it.)

19th. No sharp line can be drawn between the motor centres of the leg, arm and face of the same side, and it is very possible that in each centre all three parts may be more or less completely represented. (See remarks on Case IV.)

20th. The cortical centres for muscular and cutaneous sensibility are the same as those for motility, and probably extend backward beyond the latter over the parietal lobe also. (See remarks on Case III.)

21st. The faculty of speech cannot be located in any one portion of the cortex, and aphasia can be produced by a lesion situated in various parts of the left cerebral hemisphere; the right hemisphere apparently not being concerned in the production of speech, except in the case of left-handed persons. The memories of the muscular innervation feelings necessary to produce spoken words depend on the functional activity of the cortex of the left

inferior frontal convolution. The memories of the sound of spoken words depend on the functional activity of the cortex of the left superior temporal convolution. The memories of the appearance of written or printed words depend on the functional activity of the left angular convolution. These centres are all connected together by means of association fibres. The faculty of speech in its completeness depends on the integrity of all these parts, except, perhaps, that of the angular convolution. According as one or the other of these parts is affected, the symptoms of one or the other of the principal varieties of aphasia are produced. Motor aphasia is due to a lesion of the left inferior frontal convolution or of the white matter immediately beneath it. (See cases VI. and VII.) Sensory aphasia is due to a lesion of the left superior temporal convolution (see Case II.), perhaps also to a lesion of the left angular convolution (see Case III). Conduction aphasia is due to a lesion of the association fibres mentioned above. (See remarks on Case III.)

22d. Tumors or other irritative lesions situated in the non-motor region of the cerebral hemispheres can cause general convulsions associated with loss of consciousness. (See Cases VI. and VII.)

23d. Tumors or other irritative lesions situated in the cortical centres for the leg, arm or face, may cause convulsions commencing in the leg, arm or face, respectively, and which may become general, though they more frequently remain unilateral, and which are sometimes associated with loss of consciousness and sometimes not. (See Case IV.)

24th. Tumors situated in the cortical centre for the leg may produce a trance-like condition, or conditions resembling the attacks of petit mal of epileptics. (See Case IV.)

HEREDITY.—(*Revue Internat. des Sciences Med.*) An ancestor with six toes appeared five generations ago. Fourteen of his twenty-seven descendants have an extra finger or toe, one, a grand-daughter, having six fingers on each hand and six toes on each foot. It is seldom that a physical peculiarity can be traced through so many generations, among all the branches of a family.

Dr. J. J. Chisholm (Baltimore Academy of Medicine) has seen two men, twins aged nineteen years, each suffering from the same degree of astigmatism and of the same angles; and two girls, twins, aged twelve years, each suffering from the same degree of irregular astigmatism and the same angles.

ABSTRACTA.

NEW ANTI-RHEUMATIC, SALOL.—This is salicyl-phenyl ether, formed by salicylic and phenolic acids in the presence of a dehydrating agent. It crystallizes in large, well-developed crystals, and possesses a not disagreeable aromatic odor.

The information in regard to it is scanty, as the article is of comparatively recent origin.

Dr. Sahli's experiments go to prove its great value as an antiseptic, anti-pyretic and anti-rheumatic. He mentions cases of chronic rheumatism extending over several years where salol has been tried with most striking beneficial effects. It is particularly valuable in those cases where salicylic acid or the salicylates cannot be used on account of disturbance of the digestive functions. Salol, being insoluble, passes unaltered through the stomach, and is early decomposed in the duodenum by the ferment of the pancreas. Its action on the human system is like salicylic acid and phenol combined.

Under ordinary circumstances it may be taken for weeks, two or three times a day, without producing any perceptible effect on the digestive organs. It is said to be very effective in neuralgic affections. Sahli attributes its antipyretic effects somewhat to the phenol it contains. He recommends it as an efficient antiseptic, it being neither caustic nor irritating like phenol or salicylic acid. He employs it as a dentifrice, and considers it perhaps the only one which will effectually prevent the spread of caries in the teeth. He dissolves the salol in alcohol, and adding a small quantity of this solution to water, uses the milky solution for rinsing the mouth. His theory is that small quantities of the insoluble salol become lodged in the minute crevices of the teeth, and thus act for a certain length of time as an antiseptic.

Physically it behaves like the fats; is soluble in alcohol, ether, etc. Bandages, wool, etc., can be impregnated with it; it adheres to these surfaces more thoroughly than salicylic acid.—*Contributed by Maurice Perkins, M.D., of Schenectady, Professor of Chemical Philosophy, etc., Albany Medical College.*

CHOLESTERIN, under the name of *Lanolin*, is much used in the composition of plasters, ointments, etc., already largely taking the place of paraffin, vaselin, lard, etc.

It is obtained from wool grease, which contains about 70 per cent. of this body. Formerly it was obtained for scientific purposes from gall-stones. It crystallizes in thin tablets, has a neutral reaction, is free from smell and taste, insoluble in water, easily soluble in hot alcohol, ether and chloroform, and dissolves easily in the fatty acids. It possesses the peculiar property of absorbing more than 100 per cent. of water. It is cholesterol mixed with water which the pharmacologist Lanosation named

Lanolin. It is now manufactured by Jaffe & Darmstaedler, of Berlin.

In the composition of plasters, etc., its value is due to the extraordinary readiness with which it is absorbed by the skin. While vaselin directly hinders the absorption by the skin of medicaments, so much so that some poisonous bodies mixed with it when rubbed on the skin produce neither local nor general symptoms of poisoning, on the other hand, Lanolin has such a marked power of penetration that when mixed with poisonous drugs, such as the alkaloids, only about half of the usual proportions should be prescribed. Liebreich thinks this property is due to the fact of its originating from keratinous tissues. Lanolin may be advantageously used to replace vaselin in massage. It is not so smooth as vaselin, but it possesses the advantage that the skin, after being rubbed dry with a cloth, still remains soft and pliant. It is further recommended in cases where the epidermis is broken, as in chapped hands, and also is said to be very efficient in the treatment of dandruff or scurf. It has already been introduced into various industries, such as perfumery soaps, creams and pomades, and for greasing leather belting and improving the pliability leather. As cholesterin is present in the hoofs of the horse, it has been employed with very successful results as a lubricant for horses' hoofs. Liebreich warns the public that many substance are sold under the name of pure wool which contain free acid and various other irritating substances.

When two to three grms. of Lanolin are put in a small flask with 10cc. of a 30 per cent. solution of caustic soda and the mixture heated, red litmus paper put at the top of the flask must not turn blue. If ten parts are heated with fifty parts of distilled water in a water-bath, the Lanolin must separate as a pure oil. Impure Lanolin becomes frothy and turbid. If oily, it must be free from glycerin. When kneaded on a ground-glass plate with an iron spatula, the result must be a product containing 100 per cent. of water. It must be sticky and paste-like. If impure, the mass will be soapy and will not adhere to the spatula.—*Contributed by Prof. Maurice Perkins.*

EXTIRPATION OF RECTUM WITHOUT DESTROYING THE SPHINCTER ANI MUSCLE.—The operation of extirpation of the rectum, or a portion thereof, for carcinomatous disease, or for stricture from other growths, has been given an impetus by the work and writings of Volkmann, in Germany, who has been followed by Drs. H. O. Walker, A. Vander Veer, William H. Van Buren, and others, in this country, and chiefly by Mr. Harrison Cripps, in England. The operation, as generally performed, includes the extirpation of the sphincter, and to that extent causes great inconvenience to the patient.

The first thing to be done is to thoroughly dilate the rectum—dilate until the sphincter's muscular fibres give way and part

like the fibres of a green stick when fractured. When this is properly done, the bowel can be turned down, like rolling back the cuff of a coat sleeve, and a goodly part of the mass brought external to the body, permitting easy manipulation. To any one who has not tried dilation to that extent, the operation may look dangerous and liable to cause lasting paralysis of the muscles; but I will state that for twelve years I have been practicing it in all cases of internal hemorrhoids, fissure of anus, and fistula, and find that the paralysis only lasts for a few days, just about long enough to permit free drainage and the passage of fæces without pain or irritation. After the dilation, the rectum is to be held open by assistants, with stout wire loops bent into the shape of Sims' specula.

After the operation it is well to evenly pack the wounded surface with something that will prevent hemorrhage by giving even, steady support. Use the folds of a roller bandage made of cheese-cloth and thoroughly soaked in glycerine; this should be packed, as it is unrolled, around a rubber catheter passed well up the bowel; the end hanging out at the anus permits its ready removal. The catheter should not be omitted, as it permits the free passage of gases as they are generated.

March 24th, I was called by Dr. A. L. Fox-Rooney to see Mrs. T. P., a lady of fine physique, aged forty-three, who had been suffering with what she supposed to be hemorrhoids, for over a year. Upon examination a nodulated, warty-like mass was found, one inch from the anus, occupying about three-fourths of the calibre of the rectum, posteriorly and laterally. This had been diagnosed by the doctor to be epithelioma, in which I agreed with him and advised extirpation. The next day the operation was performed, with the assistance of Drs. A. L. Fox-Rooney and Michael Rooney. The sphincters were first fully dilated and the mass removed as described above, with the galvano-cautery. There was considerable hemorrhage, which was stopped with the cautery and a tampon applied. After the tampon was removed antiseptic injections were used of a warm saturated solution of chlorate of potassa, an agent I consider far superior to carbolic acid in operations upon the lower bowels, on account of its freedom from danger through absorption.

The microscope revealed the fact that the growth was epithelioma.

Under the careful and judicious treatment of Dr. Fox-Rooney the lady made a rapid recovery, and has had no indications of a return of the disease up to the present time, and I believe I may truly say that she is cured.—*Wm. A. Byrd, M.D., Pacific Record of Medicine and Pharmacy, San Francisco, January, 1887.*

PAINLESS SUTURE.—F. L. T. (*St. Louis Medical and Surgical Journal*). To avoid the pits and creases caused by sutures in wounds of the face, cut two pieces of adhesive plaster somewhat longer than the wound and an inch and a half wide. They

should be shaped so that one edge of each will follow the course of the lesion, but if the wound be irregular it is better to use more pieces. Turn the inner edge (or that intended to be next the wound) of each of these strips under, so as to form a non-adhesive border a quarter of an inch wide, and leave an adhesive surface of from three-quarters of an inch to one inch in width. Apply these to the uninjured skin on each side of the wound, and make them adhere firmly by holding them to this with a hot, dry towel. The stitches may now be taken from side to side, thrusting the needle through the double edge of the plaster instead of through the skin, and after the fashion of shoe-lacing, uninterrupted.

RUBBER PRESERVATION.—A commission appointed by the French War Department advises that Esmarch's bandages should be taken out of the boxes at least once a month, unrolled and manipulated. Drainage tubes should be hung up in a cool place, or soaked in a non-putrescible fluid. Finally, all objects made of rubber should be kept in a cool, damp place, at a constant temperature, and sheltered from light, heat and frost. Seeing that, in many cases, these conditions cannot be complied with, it is recommended that the bandages should be made of pure leaf rubber, in lieu of the elastic tissue usually employed. The purer the rubber the less readily does it undergo these structural alterations, and the lighter it weighs; its weight is, therefore, a sure guide to its quality.—*Northwestern Lancet*.

KOUMISS.—Mix one gallon of milk and one pint of buttermilk; stir for fifteen minutes; let it stand twelve hours and stir again, repeating the process at the end of another twelve hours. Then bottle, cork tightly, and put in a cool place. It will be ready for use in about three days, and should then be used, for if kept it will spoil.

Or— Grape sugar..... 3 iv
 Water..... f 3 iv
 Dissolve and add,
 Fleishman's yeast..... gr. xx
 Milk f 3 ij

Add to this one quart of milk, bottle and expose to a temperature of 50 degrees; it should be agitated three times a day. In three or four days it will be ready for use.—*Coll. and Clin. Rec.*

TANNIN FOR INGROWING TOE-NAIL.—A concentrated solution (an ounce of perfectly fresh tannic acid dissolved in six drachms of pure water, with a gentle heat) must be painted on the soft parts twice a day. Two cases recently had no pain nor lameness after the first application, and went about their work immediately, which they could not do before. After about three weeks of this treatment, the nail had grown to its proper length and breadth, and the cure was complete. No other treatment of any kind was used, though formerly I introduced lint under the ingrowing edge in such cases.—*Brit. Med. Journ.*

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

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VOL. VIII.

JANUARY, 1887.

No. 1.

—WE AND OUR NEIGHBORS.—“The Accouchement of a Turkish Princess,” by Dr. J. A. S. Grant, of Cairo, Egypt, is briefly abstracted from the ANNALS of May, 1886, in *New England Medical Monthly*, Bridgeport, Conn., December, 1886, without giving credit to the ALBANY MEDICAL ANNALS.

“The French Metrical System as Compared with Anglo-Saxon Metrology,” in the *Philadelphia Medical Times*, January 8, 1887, is a garbled copy from pages 283 and 284 of the ANNALS for September, 1886, taken without naming its source.

It is pleasant to know that the words of our contributors are desirable ornaments for the pages of our contemporaries, as is seen not only in the foregoing, but also in the following letter:

RICHMOND, VA., January 15, 1887.

Editor Albany Medical Annals:

Dear Doctor—The January 15th number of *Practice*, sent you to-day, contains on page 89 the “kernel” of your Berlin correspondent’s letter [the letter of Dr. J. W. Poucher, in ANNALS of December, 1886]. I place a high esteem upon the letter, and I hope our exchange will prove of benefit to the ANNALS, as I know it will to *Practice*.

Very truly yours,

J. F. WINN.

EXCHANGES, PAMPHLETS, ETC.

Annals of Surgery. Balliere, Tindall & Cox, London; J. H. Chambers & Co., St. Louis; upwards of 100 octavo pages, monthly. \$1.50 a year. Besides special contributions by the foremost surgeons of the world, this masterly journal gives each month from 20 to 40 pages of short abstracts of surgical progress.

The Decorator and Furnisher, 30 and 32 East 14th street, New York city; extra large quarto size, published monthly by the Decorator & Furnisher Co. James A. Robinson, President and Treasurer; A. Curtis Bond, Editor; George A. Halm, Art Director. Subscription, \$4 a year in advance; patent binder, 50 cents extra.

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"Substitution of Drugs." Prof. William B. Hazard, College Physicians and Surgeons, St. Louis. Reprint from *Medical Brief*. "A mixture of bromide of potassium, chloral, tinct. hyoscyamus and fluid extract of cannabis indica in appropriate doses, produced nausea and headache, but not sleep. A similar prescription, instead of the above extemporaneous officinal combination, was ordered, only 'Battle's Bromidia' was designated, which induced refreshing sleep after a few doses of from twenty to thirty drops had been taken," etc., etc.

PERSONALS.

—Dr. Horace Rennie Powell ('82) was chosen a member of the Board of Health of Poughkeepsie, N. Y., by vote of the common council, January 3, 1887.

—Dr. William H. Lemrow ('86) has located at Green Island, Albany county, N. Y.

—Dr. Herman Bendell ('62) has been appointed attending eye and ear surgeon at St. Vincent's Orphan Asylum.

—In the reorganization of the New York State National Guard, Dr. Herman Bendell has been appointed surgeon of the Third Brigade, commanded by Gen. Amasa J. Parker, Jr., of this city.

—Dr. Charles B. Mallery ('86) has moved from Glens Falls to Corinth, Saratoga county, N. Y.

—Dr. John H. Van Rensselaer ('85) completes his service as resident physician and Surgeon at the Albany Hospital next March, and will then open an office over the First National Bank, Main street, Oneonta, N. Y.

ALBANY MEDICAL ANNALS:

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No. 2.

INTUBATION OF THE LARYNX.¹

BY ALBERT VANDER VEER, M.D., PH.D., ALBANY, N. Y.
Professor of Surgery and Clinical Surgery, Albany Medical College.

Whatever investigations and procedures tend to simplify the practice of surgery, and thereby lessen the fears of friends and patient, may be considered as advanced steps in our profession, and, in the light of humanity, a public good.

For the first time in the presentation of papers, I offer to you to-night some points upon a subject in which I have had no practical experience except on the cadaver. I do this for the purpose of calling your attention to a form of treatment of certain cases of croup and diphtheria that is likely to supersede the operation of tracheotomy. The history of the subject is something like this: In 1801 Dessault was the first to pass a tube through the nostrils into the trachea,² but seems to have made no farther practical use of the idea, beyond two cases reported, one successful, the other not—both adults. In 1854 Dr. Horace Green, of New York, passed a flexible tube down into the trachea and professed to make applications to ulcers within and down the windpipe as low as the bifurcation of the bronchi.

¹ Read before the Medical Society of the County of Albany, Wednesday evening, January 12, 1887.

² An accidental performance—as he supposed for several hours, and, indeed, until he attempted to give food through it, that it was inserted into the œsophagus, as intended.

In years gone by, I have heard Dr. Thomas Hun criticise this procedure and express his disbelief of its accomplishment. Intubation of the larynx was attempted by Bouchut, a Frenchman, in 1858, but did not prove a success, either from his instruments being imperfect or from his not being able at that time to sufficiently impress his views upon the surgical workers of his day, Trousseau, the strongest advocate of tracheotomy, and his followers being allied against him. For myself, I was strongly impressed with the instrument shown me by Dr. F. C. Curtis on his return from Europe in 1870, and called Schroetter's laryngeal tube, for relief of dyspnoea in croup. It seemed to me that if this tube could be passed into the trachea that, some day, some one would succeed in lodging a tube there through which the child could breathe. Therefore, it was with a great deal of interest that I read an article by Dr. Wm. MacLean, of Glasgow, in the *British Medical Journal* for July 24 and 31, 1880, on "Clinical Observations on the Introduction of Tracheal Tubes by the Mouth instead of Performing Tracheotomy or Laryngotomy." Also a case reported by J. Wilson Paton, M.D., of Rockferry, England, of treatment of croup by passing catheters into the trachea by the mouth (*British Medical Journal*, May 21, 1881). It has been reserved, however, for Dr. Joseph O'Dwyer, of New York, to demonstrate the practical workings of the new device for the relief of dyspnoea in diphtheria of the larynx, and for the treatment of true croup.

None but surgeons can estimate how forlorn a hope we have had in the past in tracheotomy, and when the case has become diphtheritic bronchitis we have repeatedly refused to operate, knowing full well that no patient has yet recovered. Therefore, one reads with great interest the graphic description given by Dr. Northrup of Dr. O'Dwyer's early experience in developing, as it were, the tube which was ultimately to prove a success, and also admires Dr. O'Dwyer's frankness and generosity in giving credit to M. Bouchut, although working in ignorance of what that gentleman had already done. This is certain, that Dr. O'Dwyer's operation is not a revival of old methods. As noted by Dr. Brush, the nearest approach to his procedure was that of Bouchut, although a comparison of the two methods shows radical differences. On the one hand, Bouchut's tubes were short, cylindrical in shape and rested on the vocal cords, not passing into the trachea, and were supported by a

silken bridle; while Dr. O'Dwyer uses a tube of sufficient length to drop into the trachea and reach a point as low, if not lower, than does the tube usually employed in the operation of tracheotomy. These are boldly introduced between the vocal cords with the upper flanges of the tubes resting on the cords, and are left *in situ* without any attachment whatever.

Dr. Wm. P. Northrup reports twelve cases of intubation, five of which recovered, and states that in the spring of 1881 an unhappy tracheotomist, with a record which would never do to publish, and the like of which never is published, might be seen hovering about the dead-house of the foundling asylum thrusting into the larynx of every child which came upon the autopsy table a little bivalve speculum, about an inch long, so adjusted to a handle thrust through it from above as to approximate the lower ends when so adjusted, and spring apart when detached. An opportunity occasionally offered and these specula were placed between the swollen and paralyzed vocal cords in live children. They were tolerated. To be sure, at first they excited violent cough, but at length the larynx became quiet and allowed them to remain. They furthermore relieved laryngeal dyspnœa. The objection to the bivalve was that after a time the mucous membrane pressed forward between the edges of the valves and dyspnœa returned. At length the bivalve was discarded altogether, and a solid tube, compressed laterally, was used. This, with numerous modifications, is the one now employed.

The head, or collar, has undergone many changes in shape and size to conform to the shape of the larynx and allow the epiglottis to close over it. The sides of the tube compressed laterally are now made bulging, thickest midway, diminishing toward either end. The bulging and the weight of the tube, together with its anatomical fit, retain it in place.

Drs. O'Dwyer, Waxham and others of large experience advise to make the attempt—both in inserting and extracting the tube—short. Better to try half a dozen times by short dashes than prolong one.

Removal of the tube is somewhat difficult; but one ordinarily expert can often do it at first attempt, after a little experience. As to inserting, one attempt is usually enough. Dr. O'Dwyer thinks there is a tendency to underestimate the difficulties of inserting and removing the tube, and advises practice on the

cadaver and *plenty of it*, and so does Dr. Waxham. Dr. Northrup finds that after a sufficient practice the intubation of the live child is found much easier than the cadaver—the muscular action of the patient materially assisting. In the effort to protect the larynx from invasion the child instinctively raises the larynx, holds it firm, closes the epiglottis tightly and depresses the tongue. The position of the larynx is favorable, while the rigidity with which the epiglottis is held down gives rise often to the most embarrassing part of the proceedings. To hook up the epiglottis, some thrust the finger first into the beginning of the œsophagus and then bring it forward till it encounters the edge of the epiglottis. Others strike at once upon its convex surface and pass to its edge. In children under two years it is often difficult to hook it up on account of its bending upon itself. These experiences are troublesome, simply because they prolong the time.

It is within the range of possibilities to explore the pharynx and hook up the epiglottis in well children in everyday practice. This practice with normal anatomy will serve good purposes some day. To the question, "Is there any danger of the tube slipping down into the trachea?" Dr. N.'s answer is: "*No, there is none.*"

First—There never has been such an accident reported.

Second—If you were to insert the proper size, or even one a size or two too small, into the larynx of a cadaver, then cut the trachea just long enough to grasp the end of the tube *in situ*, drag the tube hard down and you would find the head below the vocal cords, but caught by the cricoid cartilage, for there is the smallest diameter.

Another question: "Does it ulcerate the vocal cords"? The answer again is, "*No.*" If you examine the tubes you will see the narrowest lateral diameter is just below the head and adjacent to the cords, and it is not wide enough to press heavily. If you will examine at autopsy you will see there is no such ulcer. If you examine your recoveries you will see that the voice returns in two to four weeks and is normal.

Dr. O'Dwyer describes the method of introducing the tube, which is done without the use of an anæsthetic, in the following words: "The child is held upright in the arms of a nurse and the gag inserted in the left angle of the mouth, well back between the teeth and opened widely; an assistant holds the head, thrown

somewhat backward, while the operator inserts the index finger of the left hand to elevate the epiglottis and direct the tube into the larynx. The handle of the introducing instrument is held close to the patient's chest in the beginning of the operation, and rapidly elevated as the cannula approaches the glottis. As soon as the obturator is removed and it is ascertained with certainty that the tube is in the larynx, the thread, which is attached for the purpose of removal should it be found to have passed into the œsophagus, is withdrawn, but at the same time the finger is kept in contact with the tube to prevent its also being withdrawn.

"Its removal is accomplished in a similar manner; but, as it is difficult, on account of the struggling of the child, to guide the extracting instrument into the narrow aperture of the tube, I prefer to give an anæsthetic for this purpose."

To the oft-asked question, "Why not leave the thread in altogether?" the experience in Hance's case and the testimony of other operators as to the annoyance caused the patient is a sufficient answer. It will be remembered that Dr. O'Dwyer *insists* upon the withdrawal of the thread as a cardinal feature of his method.

Dr. Jennings, of Detroit, in reporting four cases of introduction of the tube, all of which died, speaks of the difficulties, dangers and possibilities of the operation of intubation as follows: "It is an operation which will readily receive the sanction of the patient's friends. It is not a cutting operation, is performed quickly, without the alarming attendance of chloroform, knives, etc. This is without doubt a very great advantage, as it brings within the reach of treatment hundreds of children whose parents would allow them to die rather than consent to tracheotomy.

"Then, again, it will be popular with physicians. Comparatively few physicians will attempt a tracheotomy. Although I think the dangers and difficulties of the operation are somewhat exaggerated, still it will occasionally require a swift and masterly operation to save the patient from dying on the table. Any physician with ordinary manual dexterity can readily learn to introduce the internal tubes, and as but little immediate danger attends the operation, he will not hesitate from timidity. Intubation has been remarkably successful in the treatment of croup in very young and weakly infants, who have always been con-

sidered the worst possible subjects for tracheotomy, although my own opinion is that age alone has but little influence upon the prognosis. Quite a number of the reported recoveries were in young puny foundlings. The simple and easily performed intubation may save many such children in the future. Tracheotomy, again, offers nothing in cases accompanied by grave diphtheritic toxæmia.

"The reports of intubation show that many serious difficulties attend it. The most serious one in my experience is in swallowing with the tube *in situ*. The normal closing of the larynx cannot take place and liquids readily pass into the trachea.

"Then, the tube is liable to be blocked by tough mucus and firm pieces of membrane, and the child may have great difficulty in coughing the ordinary secretions through the tube. Under these circumstances the attendant is helpless owing to the location of the tube. After tracheotomy the tube and trachea are within easy reach, and the nurse can give invaluable assistance in the dislodgment of obstructing masses. It is also very important to apply local medicaments to the trachea to dissolve false membranes. This is impossible after intubation, while after tracheotomy it can be done with perfect ease."

On the whole, Dr. Jennings' experience is rather unfavorable, and leads him to distrust the operation, particularly for children over three or four years of age and having mild diphtheria. In his experience fully 75 per cent. of these cases recover after tracheotomy and he does not think intubation offers any such chances. He thinks tracheotomy will save every case that intubation can, and a great many more. He notes a use for the O'Dwyer tube as a guide for performing tracheotomy. Having left the tube in when performing tracheotomy in one of his cases, he was astonished at the ease and deliberation with which he could operate and how quickly he could check the bleeding from cut vessels.

Dr. J. considers, then, intubation to be not a substitute for, but a supplement to, tracheotomy, which, having some important advantages and being a simpler and milder operation, may sometimes precede tracheotomy.

From the present outlook he regards the field for the operation to be about as follows:

1. It may almost always replace tracheotomy for croup in very young infants—under fifteen or sixteen months old; and,

2. In all cases in which tracheotomy has been found to be about useless, as those attended by grave diphtheritic toxæmia, or complicating the exanthemata.

3. In all other cases, to a moderately successful operator, tracheotomy offers better results, and is, I think, to be preferred. With unsuccessful or inexperienced operators intubation may be performed and given a trial before tracheotomy is done.

4. Whenever tracheotomy is refused by the parents, intubation may be resorted to, either as a final measure or to prolong life until consent to tracheotomy is given.

5. It may be used as a temporary expedient in urgent cases to gain time to prepare for tracheotomy or summon an experienced operator.

6. The tube, with the thread attached to facilitate removal, may be inserted to prevent asphyxia, and to act as a guide while performing tracheotomy.

In a valuable table of comparisons between the relative merits of the two operations, Dr. Hance, Resident Physician of the Nursery and Child's Hospital, New York, notes that in

INTUBATION OF THE LARYNX

The tubes produce no shock during their introduction.

They are instantaneously introduced.

They are easily introduced.

They cause no wound.

They clean themselves.

The inspired air is warm and moist.

There is no increased risk of a complicating pneumonia.

There is no after treatment.

TRACHEOTOMY.

Tracheotomy sometimes produces fatal shock.

It requires from ten to thirty minutes to open the trachea.

It is oftentimes a very difficult operation, especially on a child of from four to six months of age.

It leaves an extensive wound which is liable to infection from diphtheritic poison, erysipelas, etc.

It requires constant care and attention to keep the inner tube clean.

Artificial means are necessary to make the inspired air warm and moist.

The escape of blood or other fluids into the trachea increases the risk of a septic or lobular pneumonia.

The wound requires to be treated after the removal of the tube.

Dr. Hance courageously reports the swallowing of the tube in one case in which the thread was left attached, and accounts for

it by the supposition that during an attack of dyspnoea that occurred after the introduction of the tube, it was coughed up, and the thread, being grasped by the involuntary muscles of the pharynx and œsophagus, offered sufficient resistance to draw the tube into the pharynx. The tube had previously been coughed out upon the floor.

Dr. J. Fletcher Ingals, of Chicago, warns against the danger from the entrance of food or fluids into the trachea, and advises the use of every possible precaution to prevent it. On analysis of the reports he finds that a very large percentage of the cases of intubation of the larynx have died of pneumonia, and this was undoubtedly due to the entrance of foreign substances. He believes that when careful attention is given to the administration or non-administration of food and drinks, and when the indications for expectorants and cardiac and respiratory stimulants are promptly met, a much larger percentage of cases will be saved than shown by the present history of the operation.

In the latest publication on this subject (Jan. 1, 1887), Dr. Waxham, of Chicago, an earnest advocate of intubation, who has performed the operation over a hundred times, speaks of his particular success in cases of three years and under. Fifty-two of his cases were such, a great many of them nursing infants, with thirteen recoveries, or twenty-five per cent. Among those recovering may be mentioned an infant of nine months, another of fourteen months, another of eighteen months, and another of twenty-two months. Dr. Waxham has exhibited and recommends a tracheal forceps for the particular purpose of removing false membrane in connection with the use of the tube, and cites a case in which the tube was introduced twice, but withdrawn each time, as the child was still unable to breathe until by the use of these forceps introduced by way of the mouth, a perfect cast of the whole trachea and of the two large bronchial tubes to the extent of one and a half inches was removed. The intubation tube was now introduced and respiration was so quiet as hardly to be observed.

To overcome the difficulty of nourishing the patient, he has tubes with very small heads and uses a rubber collar with artificial epiglottis attached. The rubber collar projects sufficiently to prevent the tube slipping into the trachea, and, being elastic, fits more perfectly into the larynx than the large metallic head. When the child swallows, the epiglottis presses the artificial epi-

glottis down so as completely to cover the aperture of the tube.

Dr. Waxham refers to the relation of the index finger and the end of the tube while it is being introduced as a practical point of great service to the inexperienced, and says there are two methods of placing the tube: We may introduce the index finger of the left hand until we feel the aperture of the larynx, and then guide the tube into it, or we may simply reach the epiglottis, passing the end of the tube gently over it and then making an abrupt turn, when the tube, if in the median line, will slip into the larynx. The practical point is this: When the index finger has been introduced, the end of the tube, in either case, should be passed under the finger, not over it nor by the side of it, but directly under it. In extracting the tube, the finger should be introduced over the epiglottis until it reaches the top of the tube; we then feel for the opening of the tube, and the extractor is introduced under the finger in exactly the same manner. One thing should be kept in mind, that removal of the tube should not immediately follow feeding, as vomiting may be the result. Dr. Francis Huber has reported one case where the vomit entered the tube and gave him some little anxiety.

And now, gentlemen, I take pleasure in showing you the first set of O'Dwyer's tubes and instruments exhibited in Albany, and illustrating the manner of their use upon this cadaver.

As to nourishment after intubation, it is suggested that the child be fed while lying upon the side, and that soft solids be given for the most part. When liquids are administered it should be in small quantities, as a half teaspoonful at a time. Cracked ice may be given to quench thirst.

To obviate the danger when a child utterly refuses to take nourishment and rectal enemata fail to support the child sufficiently, Waxham has had constructed a feeding-flask, consisting of a nursing bottle with a tube extending from it to the bulb of a Davidson's syringe; this in turn is connected with an œsophageal tube. The tube is introduced into the œsophagus, and by pressing upon the bulb the contents of the bottle may be quickly transferred to the stomach.

Under the head of treatment, expectorants may and should be given, some authorities giving calomel, and the same general line of treatment that is employed in croup and diphtheria should be carried out in the subsequent management of the cases of intubation as that following tracheotomy.

Dr. Waxham very pertinently remarks that, in considering whether we have a substitute for tracheotomy in tubage of the larynx, the first and most important question that will arise will be in regard to the comparative success of the two methods. Our text-books generally give one out of three as the average proportion of recoveries from tracheotomy, but that this percentage is too high, few, I am sure, will deny. It must be remembered that these results are obtained from reports of a few of our most successful tracheotomists. The thousand physicians who have met with inferior success never publish their cases, and are never heard from excepting when they raise their voices against early operations. I have myself met with discouraging results with tracheotomy, notwithstanding that every patient had the most watchful care and attention. I know of one physician who has performed tracheotomy fifty times with but two recoveries, and another, noted for his skill as a surgeon, who has operated twenty times without saving a single patient, and another who has operated fourteen times without success, and another eight times without a recovery, and still another fifteen times with but one recovery, making one hundred and seven cases with but three recoveries. Through the kindness of two of my students, Mr. McDonald and Mr. Fletcher, I am enabled to present the following tables:

INTUBATION OF LARYNX—TABLES OF CASES.

Operator.	No. Cases.	Age.	Disease.	Recoveries.	Deaths.	Remarks.
Dr. Dillon Brown.	1	5ys. 3ms.	Diphtheritic Croup.....	1	0	Death from extension of memb.
	2	16"	Diphtheria, larynx and pharynx...	0	1	" " " "
	3	1y. 11"	" " " " lar., phar., post-nasal...	0	1	" " " pneumonia.
	4	3ys.	Spasmodic Croup.....	0	1	" " " extension of memb.
	5	3 " 4 "	Diphtheria, lar., phar., post-nasal...	0	1	" " " pneumonia and extension of membrane.
	6	3 " 4 "	Diphtheria, larynx and pharynx...	0	1	Death from extension of membrane, complicated with pneumonia from onset.
	7	3 " 6 "	" " " " post-nasal.	0	1	Death from extension of memb.
	8	3 " 7 "	" " " " lar., phar., post-nasal...	1	0	Made good recovery.
	9	11 "	" " " " larynx and pharynx....	0	1	Death from suffocation, from closure of tube by swelling of epiglottis and aryglottideus.
	10	3 " 3 "	" " " " " " " "	0	1	Death from extension of memb.
	11	4 " 8 "	" " " " " " " "	1	0	Made good recovery.
	12	1y.	" " " " " " " "	0	1	Death from pneumonia (?).
	13	3ys. 9 "	" " " " " " " "	1	0	Made good recovery.
	14	3 " 5 "	" " " " " " " "	0	1	Death from infection.
	15	5½ "	" " " " " " " " post-nasal.	0	1	" " " extension of memb.
	15	Av. age, 2ys. 10ms.	14 Diphtheria. 1 Spasmodic Croup.	4	11	In all there was an immediate relief of symptoms as soon as the tube was inserted.

INTUBATION OF LARYNX—TABLES OF CASES.—(Continued.)

Operator.	No. Cases.	Age.	Disease.	Recoveries.	Deaths.	Remarks.
Hance.	1	1y. 1m.	Membranous Croup.....	0	1	Death from extens'n of memb.
	2	1y. 2ms.	" " " " " " " " " "	0	1	" " " "
	3	1y. 11 "	Diphtheritic " " " " " " " "	0	1	" " pneumonia.
	4	5½ "	Lateral Tracheitis and Bronchitis.	0	1	" " suffocation.
	5	2ys. 3 "	Diphtheria.....	1	0	Made good recovery.
W. P. Northrop.	5	Av. Age, 1y. 2½ms.	2 Membranous Croup. 2 Diphtheria. 1 Lateral Tracheitis and Bronchitis	1	4	
	1	5ys. 3ms.	Diphtheritic Croup.....	0	1	Death from extens'n of memb.
	2	5 " "	" " " " " " " "	1	0	Quite well in fifteen days.
	3	3 " 9 "	" " " " " " " "	0	1	Death from extens'n of memb.
	4	3 " 9 "	" " " " " " " "	1	0	Made good recovery.
	5	5 " 10 "	" " " " " " " "	0	1	Death from pneumonia.
	6	7 " "	" " " " " " " "	0	1	" " heart failure.
	7	5 " "	" " " " " " " "	0	1	Death, infection; case severe.
	8	1y. 11 "	" " " " " " " "	1	0	Made good recovery.
	9	" " "	" " " " " " " "	1	0	Can find no report.
	10	5ys. 2ms.	Diphtheritic Croup.....	0	1	Death from extens'n of memb.
	11	7 " "	" " " " " " " "	1	0	Made good recovery.
	12	2 " 1m.	" " " " " " " "	0	1	Death from extens'n of memb.
	12	Av. Age, 4ys. 4ms.		5	7	

WAXHAM'S CASES.

No. Cases.	Age.	Recoveries.	Deaths.	REMARKS.
1	9ms.	0	1	
1	11 "	0	1	
1	13 "	0	1	
1	14 "	1	2	
3	15 "	0	1	
1	16 "	0	1	
1	17 "	0	1	
1	18 "	1	0	
1	20 "	1	0	
2	2ys.	2	5	
2	" 1m.	1	1	
2	" 2ms.	1	1	
2	" 3 "	0	2	
3	" 6 "	1	2	
1	" 9 "	0	1	
12	" 3 "	2	10	
1	" 4 "	1	0	
1	" 6 "	0	1	
11	" 9 "	1	0	
1	" 6 "	0	3	
3	" 5 "	4	5	
9	" 7 "	1	5	
2	" 6 "	0	1	
2	" 8 "	0	1	
1	" 11 "	0	0	
7	.....	6	7	
31	.....	9	6	
96	Av. Age, 3ys. 7ms.	29	67	

It will be observed that 11 cases with 3 recoveries were under 2 years of age; 28 with 8 recoveries were under 3 years; 14 cases with 3 recoveries between 3 and 4 years; 15 cases with 6 recoveries between 4 and 5; 9 cases between 5 and 6 with 4 recoveries, and 10 cases with 2 recoveries between 7 and 11 years.

Of the 58 cases coming directly under Dr. Waxham's observations 20 were moribund when the operation was performed, many of them entirely unconscious, and 40 were bad cases of diphtheria characterized by an exudate upon the pharynx and trachea and severe constitutional symptoms. In every case the tubes were inserted to prevent impending suffocation. The relief was immediate, and shreds of the membrane were readily expectorated through the tubes. "In 18 other cases the operation was a perfect success, although the patients died."

These cases, added to those where entire recovery occurred, gives a result of 47, or 48.96 per centum, in which the operation was entirely successful.

In those who died, death was generally from extension of the membrane into the bronchi.

Dr. O'Dwyer reports 48 cases with 12 recoveries. Of these 25 were foundlings, and of this number 6 recovered, while of the 23 cases in private practice 6 recovered. Fifteen of the 48 cases, with 4 recoveries, have been reported in detail by Dr. Dillon Brown, a table of which is submitted above.

INTUBATION OF LARYNX—TABLES OF CASES.—(Continued.)

C. J. JENNING'S CASES.

No. Cases.	Age.	Disease.	Recoveries.		Remarks.
			Deaths.		
1	6yrs.	Diphtheria.....	0	1	Performed Tracheotomy also.
2	12mos.	Membranous Croup.....	0	1	Death from pneumonia.
3	4yrs.	" ".....	0	1	" " extension of memb.
4	5yrs.	" ".....	0	1	" " exhaustion.
	Av. Age, 4 years.		0	4	Jennings distrusts the operation, particularly for children over three or four years of age and having mild diphtheria.

The percentage of recoveries from the 165 reported cases is 28.48.

In the report of 11,000 cases of Agnew upon tracheotomy, he gives 30 per cent. of recoveries. The "Encyclopædia of Surgery" (Lippincott's), from a report of 5,000 cases, states that one out of every four recovers.

This, it is fair to assume, does not include cases of diphtheria or of diphtheritic bronchitis, as very few physicians have felt like doing this operation for these conditions in the past. It may be truly said that one of the most brilliant results of intubation is afforded in the relief from suffocation in these desperate cases.

The method is only just beginning to attract attention in England. The reports of Lewis Smith, Northrup, Hance and Ingraham have been made the subject of a favorable review in a recent number of the *Manchester Chronicle*, one of the few British journals that has given consideration to intubation.

Finally, there is no doubt that intubation will be of great service in treating cases of stricture of the larynx and trachea due

to traumatism, syphilis, tuberculosis and allied conditions. In fact, Dr. O'Dwyer has already reported two or three successful cases.

No doubt that in some of our severe cases of œdema of the glottis, when other remedies fail, intubation will be of great service.

[A gentleman whose fauces had been anæsthetized by cocaine presented himself, and permitted the introduction of a large tube into the larynx. After an interval, the operation was repeated. The patient then withdrew, and a cadaver was brought into the room, braced in a sitting position.]

A CASE OF INSUFFICIENCY OF THE EXTERNAL RECTI MUSCLES.

BY THOS. FEATHERSTONHAUGH, M. D., ALBANY, N. Y.

(ALBANY MEDICAL COLLEGE, 1877.)

It is often helpful to our fellow practitioners to detail a case which has given rise to perplexities in its management. With this view, I collate the notes of a case which was of great interest to me, and which taught me a good practical lesson that has been useful to me on subsequent and somewhat similar occasions.

Mr. H., an unusually robust young man, aged about twenty-four years, a college student in his junior year, consulted me in April, 1881, in reference to his eyes. The subjective symptoms which led him to seek advice were pain in both eyes and head, and confusion or even doubling of objects at a distance. He had lately discovered, too, that he could not easily see near objects with his right eye alone, and he knew that the pupil of this eye had become widely dilated. These, with the exception of the blurring of the right eye for near points, were by no means recent troubles, but had existed with more or less intensity from his earliest recollection. The indications of insufficiency of the external recti were well marked. The conjunctivæ were injected, and the eyes had the weary, watery appearance so common to asthenopia. V. of each $\frac{x}{x}$, and all glasses rejected. The pupil of the right eye was as thoroughly dilated as though atropia had been used, and there was incomplete

paresis of the accommodation in this eye. I found by the equilibrium test, with a lighted candle at twenty feet from the patient, that it took prisms of 17° to bring the images in the same vertical line. With a red glass over one eye, there was homonymous diplopia, and again prisms, of 17° , bases out, were necessary to unite the images. If an additional prism of 3° was placed over the 17° , making the sum of the prisms 20° , the images immediately crossed over and heteronymous diplopia was produced. No paresis of any of the motor muscles of the eyeball could be detected. I had, as a rule, never consented to operate in a case of insufficiency where the convergent power was so defective. I like to have the internal recti overcome prisms of 40° or more before interference with these muscles. I had the patient, therefore, come in for a week or more daily, to see whether I could not induce a little flexibility of the internal muscles by gymnastic exercises with the prisms. 2° or 3° , however, in addition to the 15° or 17° necessary to neutralize the insufficiency, proved an obstacle that he could not overcome, and we made no progress. Mr. H. had now become so expert in detecting the double images that he was rather worse than when he first saw me, for the reason that the diplopia, which had annoyed him only at times, was now a pretty constant attendant.

I explained the whole matter, as well as I could, to the patient, and told him that I had decided to operate if he gave his consent. In the early part of May I made a pretty free tenotomy of the internal rectus of the left eye. Immediately after the operation there was still homonymous diplopia, but the images were united by a prism of 6° .

June. Eyes feel very much better, and there is far less confusion. I find that there is still diplopia when the red glass is used, but that, ordinarily, binocular vision is maintained. Insufficiency of the externi by Graefe's test 6° . The patient was now going home for his vacation and further operation was deferred until autumn.

December. Patient overcomes prisms of 32° bases out, and unites the images of the candle readily, without the aid of a prism, even when the red glass is used. He can bear a prism of 2° , base in, and hold the images together. The accommodative paresis in the right eye is gone. There is still some confusion of sight for distant objects, but this occurs infrequently and only when the eyes are thoroughly tired.

I saw Mr. H. at intervals during the winter, but since he was getting along very comfortably and hard at work, nothing more was done until May, '82. At this time he had a little respite from college work, and was desirous of completing the surgery upon his eyes before going to his home to pursue his professional studies. I, therefore, made a tenotomy of the internal rectus of the right eye. Immediately after the operation there was slight heteronymous diplopia, but images were united by a little effort, prisms aggregating 25° , with bases out, were overcome by considerable persistence, while the abductive power was only 4° . The next day, finding the crossed diplopia still persisted, I put in one stitch, merely through the conjunctival membrane, which caused slight homonymous diplopia. This condition righted itself after a day or two, and when the stitch came out, I found, by Graefe's equilibrium test, insufficiency of the interni of 2° to 3° to twenty feet, and, of course, more at near range. When cicatrization was complete, the abductive power came up rapidly, and, in two or three weeks, prisms aggregating 50° were easily overcome, and the abductive power became 6° . All sense of confusion was now gone and the eyes were perfectly comfortable. In the course of my treatment I had used atropia, and found hyperopia of 0.50 D. in each eye. So small an amount as this seemed hardly worthy of correction,

I have lately received a letter from this patient, in which he says that he has been able to use his eyes as freely as any of his friends; that he studies hard without the least sense of discomfort, and feels confident that the eye question, as far as he is concerned, is solved.

There were occasions, previous to the operations, when the strabismus was readily apparent to even an unskilled operator, and at other times the external muscles seemed to have the strength requisite to render the axes of the eyes practically parallel. There was, doubtless, a large amount of latent insufficiency, which, of course, I could not detect by the prisms.

The perplexing point in the case was the utter inability to converge the eyes beyond the point where they were accustomed to stand. The logical inference from this state of affairs was, that if tenotomy was performed, making the axes of the eyes parallel, convergence would be nil, and the patient would be seriously crippled for his near work. The issue of the matter shows that *tenotomy of the internal recti improved the converging*

power in a very marked manner. The internal recti had done very little work for many years. The convergence of $2\frac{1}{2}$ metre angles was sufficient for near work, without any special demand upon these muscles, which had, consequently, lost their elasticity. As soon as they were brought into natural use, they recovered their normal tonicity. Ordinarily six or seven metre angles of convergent power remain in reserve after the adductor muscles have fixed the eyes upon the near point. This great excess of power is slowly expended, and enables the eyes to maintain their convergence for long periods. In the case under consideration there was no reserve power, because none was needed. The convergence here was a *passive condition*, while ordinarily it is a result of active muscular contraction.

Though I have not recently seen the patient, I have no doubt that the insufficiency of the interni, which resulted from the second operation was only apparent, and has entirely disappeared by this time. Mr. H. was so accustomed to make excessive traction upon the external muscles in order to secure binocular vision, that he maintained this effort even when the necessity for it was removed.

The semi-paretic condition of the accommodative apparatus of the right eye was the result, apparently, of the constant wearying strain upon the eyes produced by the disarrangement of the delicate relations normally existing between the accommodation and convergence. Had these functions not been restored there is a possibility that serious organic changes would have ensued. —*The American Journal of Ophthalmology, St. Louis, November, 1886.*

MAGNETISED WATER.—M. H. Dunville (*L'Electricien*): If two glasses of water be placed upon the poles of a magnet, the one on the north pole becomes alkaline, the other acid.

HEREDITARY TRANSMISSION.—Branell inoculated an animal during gestation with anthrax, and death ensued in two days. He then infected four healthy animals, one with blood from the dead mother, three with blood from the fœtus. The animal inoculated with blood from the mother died the next day, while those inoculated with blood from the fœtus showed no signs of the disorder. Strauss, on the other hand, states that he has found the bacilli in the fœtal blood, but admits that their number is very small.—*Brit. Med. Jour.*

ABSTRACTA.

ELECTROLYSIS PER INTUBATION TUBE.—On October 26, Dr. F. E. Waxham, Chicago, introduced an intubation tube threaded with platinum wire into the trachea of a girl eight years old who was semi-comatose, having had membranous croup for a week. The platinum wire was insulated by rubber tubing and connected with the negative pole. A moist sponge was the positive electrode. Ten cells were used for five minutes. Much mucus and membrane were expelled. Accidentally the tube was withdrawn. Respiration was free. Two hours later electrolysis was again performed. At 2 A. M. the tube was again introduced and left *in situ*. The child died the next day of pneumonia.—*Jour. A. M. A.*, Jan. 1, 1887.

ON THE THERAPEUTIC UTILITY OF GASEOUS ENEMATA.—Bergeon (*Gaz. des Hôp.*, Aug. 17, 1886) at first employed the method only in pulmonary phthisis, making use of sulphurous mineral water. In a later communication (*La France Méd.*, Nov. 18, 1886) he advocates its use in other disorders of the respiratory tract. Having to care for many phthisical patients, many of whom have laryngeal phthisis of various sorts, he has been struck by the poor results of local treatment of the same, aside from the very disagreeable and often painful nature of local applications. Such local treatment he has abandoned and has substituted gaseous enemata, by which means he claims that he always secures cessation of pain, relief of spasm, and finally complete cicatrization of ulcers. He cites a typical case (the patient was presented for examination by members) as follows: This patient had sought treatment ten months before for an aphonia due to destruction of the vocal cords; the patient at the time was in the last stages of hereditary consumption. The pains in the throat were so violent that the patient ate nothing for three days, to avoid the agony caused by movements of deglutition. A few days' treatment by gaseous enemata relieved the pains, and in two or three weeks the ulcers commenced to heal. Cicatrization had been maintained eight months, in spite of the state of the lungs, which were the seat of large excavations.

In acute phthisis, phthisis of pneumonic origin, and galloping tubercular phthisis, where the prognosis is generally so grave, Bergeon asserts that gaseous enemata produce a rapid lowering of the temperature, a slowing of the pulse, a checking of sweats, cough and expectoration to such an extent that the patients may often be called convalescent in from fifteen to twenty days.

Cornil (*La France Méd.*, Nov. 13, 1886), in an article on this subject, explains a simple way of generating and using the gas. Carbonic acid gas is generated in a strong flask by the action of

dilute sulphuric acid on bicarbonate of soda, whence it is conducted into a gas-holder of any sort capable of storing several litres of the gas. From this receptacle it can at any time be passed by means of tubes through sulphurous or any medicated water, and then by other tubes be introduced into the bowels of the patient. Cornil thinks the crucial test of the method is by thus treating animals rendered tuberculous, and says he has many such experiments already started.

Chantelesse (*La France Méd.*, Nov. 13, 1886) has had some favorable results with this treatment in his hospital service during September and October. According to him, asthmatic attacks are cured by enemata of CO, charged with sulpho-carbonaceous vapors. He treated nine patients with general and local signs of pulmonary tuberculosis and bacilli in the sputa, with great amelioration of symptoms. The weight of the body increased rapidly, while the cough and expectoration markedly diminished. The bacilli continued to be present in the sputa. One of these patients gained nine pounds in a month and a half.

De la Roche (*Lyon Médical*, Nov. 28, 1886) has experimented with and elaborated Bergeon's method. The first results of the treatment he expects to see are a lowering of the temperature, the return of natural sleep, the cessation of night-sweats, and the diminution of purulent expectoration. The appetite improves, the strength returns, and the body-weight increases. These phenomena follow a checking of suppuration and septicæmia. In some cases also it checked a diarrhœa which was present, while in others it seemed to cause a constipation, which had to be overcome by laxatives. The treatment in some cases produces colicky pains, which in one instance were so severe as to necessitate a cessation of treatment. This patient had advanced hemorrhoidal trouble and fissure of the anus. De la Roche has in some cases replaced the sulphurous water by the essence of eucalyptus. By varying the medicinal substances he believes the method of Bergeon applicable to numerous affections, whether of parasitic (microbic) or nervous origin. He does not think all tuberculous subjects should be treated in this way. Where both lungs are extensively invaded and much dyspnœa is present, he considers the treatment unwarrantable.—*The Medical Analectic*.

Dr. James T. Whittaker (*Cincinnati Lancet-Clinic*) makes the following remarks on this subject:

It has been recently suggested that putrefaction does not destroy by means of its bacteria, but by its products, especially sulphuretted hydrogen.

Experiments have been made to reach the diseased areas in the lung by introduction, into the bowel, of this gas with suitable apparatus, to be eliminated by expiration.

This method has been tried at the Paris hospitals, but the results did not warrant the continuation of this method of treatment. Nor could we expect much from these observations.

Tuberculous consolidations constitute a mass as impervious as liver tissue, and we cannot expect by any plan of temporary inhalation or exhalation to accomplish much in eradication of the disease.

Bacteriologists expect least from attempts to destroy the germ, and the attention of clinicians is directed more to render the soil unfertile or sterile. We know that five-sevenths of mankind have tuberculosis. But it is also well known that the majority of cases recover, inasmuch as one-seventh, or two-sevenths of patients, die of the disease. Attempts are continually made to imitate nature in this respect.

It is observed that people in closest contact with tubercular patients do not contract the disease, unless the soil of the lungs is favorable to the growth of the germ.—*The Epitome*, Jan., '87.

TANNIN TREATMENT OF PHTHISIS.—Drs. Arthaud and Raymond (Paris letter to the *British Medical Journal*) obtained some very remarkable results from tannin. "Six rabbits were treated for a month with doses of tannin, varying from seven and a half to fifteen grains; after two successive inoculations, one with lung tissue from a patient who had died from acute tuberculosis, the other with miliary tubercle from a hospital patient, no trace of infection was observed, while the three other rabbits, to which tannin had not been given, succumbed in consequence of inoculations with the same material. These experiments suggested a mode of treatment which has been adopted with excellent results in over fifty cases. Tannin was given in doses of from thirty to sixty grains a day, and the improvement was visible at the end of a fortnight, the patient had increased in weight, and no relapse occurred. In cases of acute tuberculosis, both in children and adults, it sometimes happens that the symptoms appear less favorable; but at the end of a week or a fortnight the patient's condition improves, even when fatal results have been feared. From these experiments the following conclusions may be drawn: (1) That tannin is preferable to sulphide of carbon or iodoform in the treatment of tuberculosis; (2) that animals submitted to this treatment for a month offer great resistance to the action of tubercular virus."

TANNIN FOR CHOLERA.—The value of astringent remedies was demonstrated clinically in the last London epidemic. Cantani in Naples (*Deutsche Med. Zeit.*, Dec. 14, 1886) found that at 100° F. a one per cent. solution of tannin added to pure cultures of cholera bacilli makes the microbes sterile without killing them. In the recent epidemic in Italy he succeeded in reducing the mortality "two-thirds" by the enteroklysis of tannin solution. The hypodermoklysis of warm water (not to be made in the neck, but best in the side of the abdomen near the ileo-cæcal valve) in patients who were cold and unconscious was followed by micturition and signs of returning appetite. A

olysma of tannin (1 to 40) twice a day was used as a preventive of cholera.—*Med. and Surg. Reporter.*

TANNIN TEST FOR DRINKING WATER.—Dr. Hager, in 1871, used a clear solution of tannin. Pour a tablespoonful of the solution into a tumblerful of the suspected water. If no turbidity occurs within five hours, the water is good. If turbidity occur within one hour, the water is decidedly unwholesome.—*Canada Lancet.*

QUININE AS AN ANTIPYRETIC IN PNEUMONIA.—Dr. John H. Ripley, New York Academy of Medicine, January 20, 1887. The conclusion that quinine was a feeble antipyretic in pneumonia was arrived at by his experiments. But, besides being only a feeble antipyretic, there were other objections to its use. In even moderate doses it produced anorexia and nausea, and in large doses it not unfrequently excited retching and vomiting, prolonged intolerance of food and stimulants, marked cardiac weakness lasting several hours, sometimes associated with di-crotic pulse. Profuse, often cold, perspiration was another effect; epistaxis occurred in about twelve per cent. of the cases; profound nervous depression, somnolence, delirium, muscular twitching and trembling, dilated pupils, in two cases opisthotonos, were among the effects upon the nervous system. In three cases in which a thorough examination of the urine was made, the albumen was found increased in quantity after taking quinine, and in one there appeared renal casts, which had not been present before. In his opinion, these injurious effects of quinine more than counterbalanced any good arising from the slight temporary reduction in the fever which it produced. He had not been able to find evidence that it ever shortened the course of the disease or lessened the mortality.

Dr. A. Jacobi (President) seldom gave quinine for its antipyretic effects in pneumonia at the present time, as antipyrine, for instance, was more efficient. But some years ago he employed it and had obtained benefit from its use. It was important that it should not be given during the height of the fever, as it would not then be absorbed and would injure the digestion; if given hypodermatically, the carbamide of quinine was the best form to administer. At the time he referred to he was in the habit of giving from six to ten grains during the day to a child, and he got the name of overdosing; now, however, many physicians gave much larger doses, but without getting the unpleasant appellation which had stayed with him, notwithstanding he gave no larger doses than formerly, now looked upon as moderate.—*Philadelphia Medical Times.*

THE DERIVATIVE ACTION OF IPECAC IN PNEUMONIA.—Dr. Ferdinand Verardini, of Bologna, finds as the result of experimental and clinical studies that:

1. Large doses of ipecac have been given in an empirical way in croupous pneumonia by the most celebrated physicians during

the past century, for the purpose of producing a depressing and antiphlogistic action.

2. The employment of large doses of ipecac (grammes 2, 4, 6 and 8, according to the case) has no disagreeable effect in the way of stasis of the blood or cardiac paralysis, and an emetic effect is exceptional.

3. It is beyond doubt that these doses have a salutary affect in decreasing the flow of blood into the lung and in bringing about and aiding resolution, and this, too, without any risk to the patient.

4. Large doses of ipecac produce effects unlike those of tartar emetic. That is to say, ipecac causes anæmia and tartar emetic hyperæmia of the lungs.

5. After producing frank pneumonia in animals by injecting into the parenchyma of the lungs through the bronchi different irritating substances, such as cantharides, ammonia, pneumonic sputum, etc., the author has been able to determine positively the comparative action of ipecac and tartar emetic on the lungs.—*L'Union Medicale*.

TARTAR EMETIC IN LABOR.—In a paper on "Neglected Remedies" (*Philadelphia Medical Times*, Sept. 18), Dr. Caleb Green, of Homer, N. Y., writes: Tartar emetic is one of the most efficient agents in promoting parturition. When the pulse is tense, the os rigid, the skin dry and hot, the advance of the head slow, I have seen, by the use of small doses of antimony, the most prompt and happy change for the better. The pulse softens, the skin becomes moist, the rigid os relaxes, the vagina becomes bathed in a plentiful supply of mucus, and the uterine contractions hasten on to a speedy termination of the labor. It is not a substitute for ergot, but it has properties which make it much oftener available as a means of hastening labor to a happy termination. If the dose can be graduated so as to produce its effects as a parturient just short of nausea, and especially short of vomiting, the effect seems to be better than where vomiting occurs.

PROSECUTION FOR VENEREAL INFECTION.—Some consternation may be produced among a certain class by a recent judgment of Justice Wills, of the Central Criminal Court, England. The charge against the prisoner was in two counts—one that he had had carnal knowledge of an imbecile woman aged eighteen years, and the other (under 24 and 25 Vict. c. 100, s. 47), for a "fraudulent assault" upon the same woman, occasioning her actual bodily harm. The harm done was the wilful infection with syphilis. The prisoner was found guilty on both counts, and sentenced to two years' imprisonment for the first and five years for the second. The more remarkable piece of information is that a man who has immoral sexual connection with a woman, knowing himself to be suffering at the time from gonorrhœa or syphilis, is liable to prosecution and penal servitude.—*Medical Record*.

ANTIPYRINE relieves headache when due to indigestion, loss of sleep, menstrual disturbance, mental fatigue, uræmia and cranial neuralgia, and is prophylactic in sick-headache (Dr. John Blake White, *Med. Record*, Sept. 11). Dr. Ungar (*Centralb. Klin. Med.*) gives doses of fifteen grains for hemicrania. Antipyrine is also hypnotic.

Dr. Bosse (*Berl. Kl. Woch.*) dusts indolent ulcers with antipyrine, covers with salicylated cotton and a snug bandage. After granulation is established the stimulant antipyrine is replaced by iodoform.

Dr. Casati uses a five per cent. solution of antipyrin as a hæmostatic. Dr. Lavrand uses a three per cent. solution on lint for epistaxis.—*Medical Record*, Feb. 26.

ANTIFEBRIN, in four-grain doses, is employed by Dr. Fordyce Barker. Dr. E. G. Janeway considers antifebrin "the safest, most reliable and certain antipyretic agent we have." Antipyrine was rejected because it had not acted well.—*Geo. R. Elliott, M.D., Medical Record*, Feb. 26.

HOW TO REDUCE A COLLES FRACTURE.—After deprecating the unsatisfactory manner in which directions are given in most surgeries for the reduction of Colles fracture, Dr. Hunter P. Cooper, late surgeon to the Presbyterian Hospital in New York, writes as follows: "Of course, reduction is effected with more ease and with more marked benefit to the patient if it is done within a few hours of the occurrence of the injury. I am convinced that immediate reduction lessens the subsequent inflammation, and as a consequence less adhesion takes place between the tendons and their sheaths. Hence our first effort should be to disentangle the fragments. This is best done as follows: Grasp the patient's hand firmly, as if you would shake hands with him; the other hand is placed over the patient's wrist so that the thumb lies over the posterior aspect of the lower fragment, while the fingers lie over the anterior aspect of the upper fragment. While an assistant steadies the forearm, you carry the hand strongly backward—i. e., produce hyper-extension, in order to disengage the upper fragment from the cancellous tissue of the lower. As soon as this is done, press the lower fragment forward with the thumb, counter-pressure being made by the fingers on the upper fragment. Simultaneously with this pressure, carry the hand rapidly into flexion, at the same time bearing towards the ulnar side, and the fracture is reduced. The ease with which reduction is accomplished by this method of hyper-extension will astonish any one who has struggled in vain to effect it by simple traction and pressure."—*Atlanta Medical and Surgical Reporter*.

MURIATE OF CAFFEIN has been used by Ferrier in removing foreign bodies from the cornea. Anæsthesia was complete.

COMBUSTIBLE GAS AS A PRODUCT OF DISORDERLY DIGESTION.—Dr. F. E. Quinby, Fayetteville, N. Y. (*Med. Record*, Nov. 27): There is a gentleman of this town, who possesses a good reputation for truth and veracity, who narrates a curious tale. He is troubled with a dyspeptic difficulty, one of the symptoms of which is the eructation of gas that will take place toward evening. Last night, at or about one o'clock, he lighted a lamp, and was just about to blow out the match when some of the gas was belched. As it issued from the mouth on the burning match it took fire—"it went puff." The flame, which is described as being of a bluish color, singed the hair, eyebrows and mustache; also, as the gentleman gasped, some of the flame was slightly inhaled, burning the hair of the nose, the lips and the tongue slightly. There was no coal fire in the room at the time. I do not know of a parallel case, therefore I write you, hoping that through your valuable *Record* some of my medical brethren will offer a solution.

[An exactly parallel case is reported in *THE MEDICAL ANNALS* for April 1880, page 28.]

URINARY INCONTINENCE OF CHILDREN TREATED BY SUPPOSITORIES.—Dr. E. T. Williams (*Boston Medical and Surgical Journal*): Morphine alone relieves for the time being, but does not cure. Belladonna and atropia are curative, when continued long enough, though better borne in combination with a little morphine, which counteracts some of their bad effects, and enables them to be given more continuously. The requisite dose of belladonna is smaller when combined with morphine. When these medicines produce headache or nervous excitability, I use the bromides as a corrective, or suspend their administration for a time. I have found no case where they could not be borne when properly given. A fifteen-grain suppository of cacao butter should contain, for a child five years old, one-eighth of a grain of belladonna extract and one-sixteenth grain of morphine; but the doses must be carefully adapted to the particular case in hand, beginning with a small dose, with a smaller relative proportion of belladonna, and increasing the latter and diminishing the morphine as toleration becomes established.

MAN'S ORIGINAL DENTITION included six incisors in either jaw; two from each jaw have gradually disappeared; this loss is due to the contraction of the anterior part of the palate; this process of contraction will probably go on and result in the loss of two further incisors; the conical shape of many of the supernumary teeth indicates a reversion to the primitive type of tooth.—*Prof. Windle, British Ass'n.*

MILK WARM FROM THE COW, when placed in tight cans in a warm atmosphere, will so change as to develop poisonous ptomaines sufficient to cause toxic symptoms in those using the milk.—*Dr. Newton, Medical News.*

BEER YEAST AS A THERAPEUTIC AGENT.—The European medical press has circulated very largely the assertion that during cholera epidemics the employes of breweries have been singularly free from the contagion. The experiments with beer yeast, made by Dr. Heer, the attending physician of the penal institution at Ratiberg, as communicated by him to the *Deutsche Medizinische Zeitung*, may be of considerable interest. He says that he had noticed more than twenty years ago that, in more than four hundred cases, pure beer yeast would rapidly cure scurvy, and that its use was without danger or even the slightest unpleasant consequences.

In 1866 he tried the same remedy in the treatment of cholera, and met with better results than with any other mode of treatment, and thus came to the conclusion that the yeast plant was an antagonist of the comma-bacillus as well as to the microbe causing scurvy, and that thus a remedy was found which, without injury to the human system, would deprive these bacteria of their sustenance. The following were the conclusions arrived at:

1. Yeast is probably a powerful remedy for zymotic diseases, and in scorbutus and purpura, undoubtedly so.

2. In several cases of well-advanced tuberculosis I have seen it overcome high febrile conditions, followed by a well-established arrest of the solidifying of the lung tissues, which had progressed several months.

3. The exhibition of yeast is very easy; doses up to two litres per day were given without the slightest bad results.

4. The remedy is readily taken by the patient and replaces the use of milk.

5. By its easy assimilation it becomes a nutrient.

Dr. Heer suggests the administration of beer yeast in diphtheria, and hopes for the best results from its use. As beer yeast can be obtained at any lager beer brewery, it would seem as if our physicians should give this new remedy a thorough trial, remembering, in this connection, the good effects generally obtained from the use of the old-fashioned yeast poultice.—*Am. Analyst*.

"THE STALE CRUMB," says Prof. Horsford, who has experimented upon the matter, "may be regarded as a framework of gluten, coated with glossy dried starch, not readily dissolved by the saliva. But by heating, the watery hydration of the gluten is driven out, the starch is moistened, and the whole crumb, recovering the elasticity of fresh bread, is palatable. On cooling, the water is withdrawn from the starch and restored to the gluten, and the bread becomes stale."—*Northwestern Lancet*.

ARTIFICIAL TEETH.—Sir Henry Thompson holds that artificial teeth are an evil in those of advanced years, because they enable such persons to masticate flesh. When the teeth fail naturally it is nature's design that the individual should subsist on vegetable diet.

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BOOK NOTICES.

NERVOUS DISEASES AND THEIR DIAGNOSIS. A treatise upon the phenomena produced by diseases of the nervous system, with especial reference to the recognition of their causes. By H. C. Wood, M.D., LL.D., Member of the National Academy of Science. Philadelphia: J. B. Lippincott Company, 1887. 501 pages, octavo, \$4.00.

Lucid language, clear type, a full index, and, above all, the presentation of late advances in this department of science, constitute the truly great attractions of this book.

The distinguished author is widely recognized as one competent for his task. His preparation has developed during fifteen years spent in the medical wards of military and civil general hospitals, and ten more years' service in charge of the nervous-disease wards of the Philadelphia Hospital, aggregating 125 beds, and the nervous clinic of the Hospital of the University of Pennsylvania, comprising over 500 new cases annually. In his youthful days he served as resident physician in an insane asylum, and more recently he has been connected with several such institutions, as a consultant. Some of his former pupils, insisting that the method of teaching which has been gradually evolved in the clinics at the University Hospital was different from that commonly in vogue, have urged the publication of this volume on Diagnosis.

Acknowledgment is made to Dr. George E. De Schweinitz for much assistance "in various ways and places, but especially in the anatomical portion of the book, in the chapter on Eye Symptoms, and in preparing the index."

The contents include Neurasthenia, Functional and Organic Paralyzes, Convulsions, Tremors, Chorea, Contractures, Automatic Movements, Reflexes, Disturbances of Equilibration, Trophic Lesions, Sensory Paralyzes, Exaltations of Sensibility, Disturbances of the Special Senses, Disorders of Memory, of Consciousness and of Sleep, Insanities and other Disturbances of Intellection.

WEAR AND TEAR, OR HINTS FOR THE OVERWORKED. By S. Weir Mitchell, M.D. LL.D., Harv., Member of the National Academy of Science, President of the College of Physicians of Philadelphia, etc. Fifth Edition, thoroughly revised. Philadelphia: J. B. Lippincott Co., 1887. 76 duodecimo pages, \$1.00.

That "this little book," copyrighted in 1871 and again in 1887, has not been written in vain, may be surmised by the following extract from the preface:

"It is now but fifteen years since this little book was written as a warning to a restless nation possessed of an energy tempted to its largest uses by unsurpassed opportunities. There is still need to repeat and reinforce my former remonstrances; but I am glad to add that since I first wrote on these subjects they have not only grown into importance as questions of public hygiene, but vast changes for the better have come about in many of our ways of living, and everywhere common sense is beginning to rule in matters of dress, diet, and education."

WINCKEL'S DISEASES OF WOMEN, BY PROF. PARVIN. By Dr. F. Winckel, Professor of Gynæcology, and Director of the Royal University Clinic for Women in Munich. Authorized translation by J. H. Williamson, M.D., Resident Physician Allegheny General Hospital, Allegheny, Pa. Under the supervision and with an introduction by Theophilus Parvin, M.D., Professor of Obstetrics and Diseases of Women and Children in Jefferson Medical College, Philadelphia. 674 pages, uniform in size with other volumes of the "New Series of Manuals for Medical Students." Cloth, \$3.00; leather, \$3.50. P. Blakiston, Son & Co., 1012 Walnut street, Philadelphia.

"Blot out the work done by German obstetricians and gynæcologists in the last twenty, or in the last ten, years, and the field of knowledge in these departments of medicine would be materially lessened, and some of the most important advances lost." Prof. Winckel's treatise on diseases of women was issued in Leipsic one year ago. A special merit of his book is the importance given to pathological anatomy, and thus a founda-

tion made for thorough knowledge. "Only by the knowledge thus acquired can we learn correctly to discriminate between diseases, and arrive in many instances at the proper application of therapeutic agents." "The student of this work will adopt the conservative teaching of its author, and endeavor by medical means to cure some maladies of organs which, according to others, demand instant extirpation of the diseased structures, only resorting to radical treatment when these means fail."

"The many illustrations, all of them new, and most of them remarkably good, add to the value of the work. Many diseases of the genital organs, not mentioned in our English text books at least, are here described, and the classification given greatly facilitates the study of all."

While the author has omitted an account of genito-urinary fistulæ, the omission is compensated by the chapters upon diseases of the mammæ.

Prof. Parvin considers the volume a full, faithful and clear translation of the German work, with the omission of a very extensive bibliography, which, to most readers, is without interest, and of some plates of instruments; all other illustrations, procured directly from the German publishers, are introduced.

DISEASES OF THE LUNGS AND PLEURÆ, INCLUDING CONSUMPTION.

By R. Douglas Powell, M.D., Lond., Fellow of the Royal College of Physicians; Physician to the Middlesex Hospital and to the Hospital for Consumption and Diseases of the Chest, at Brompton; late Assistant Physician and Lecturer on *Materia Medica* at the Charing Cross Hospital. Third edition, rewritten and enlarged, with illustrations, including two lithographic plates; being Vol. XI. of Wood's Library for 1886 (12 volumes in set, price, \$15.00). New York: William Wood & Company.

This is an amplified edition of the work on "Consumption and on certain Diseases of the Lungs and Pleuræ," which was published in 1878. The book has been for the most part rewritten; and new chapters have been added on Physical Examination of the Chest, Asthma, Etiology of Phthisis, Complications of Phthisis, Surgical Treatment of Pulmonary Cavities, Hydatid of the Lungs, and Mediastinal Tumors. A large portion of the work is devoted to treatment, although the chapter on climatic treatment is comparatively short. The elegant plates of tubercle bacilli, the table of International Nomenclature of Physical Signs, and a good Index, add to the practical value of the work.

DISEASES OF THE BLOOD AND NUTRITION, AND INFECTIOUS DISEASES; being Vol. IV. of "A Handbook of Practical Medicine," by Dr. Hermann Eichhorst, and Vol. XII. of Wood's Library for 1886 (completing the set—price of set \$15). Illustrated. New York: William Wood & Company.

Eichhorst's concise style makes it possible to treat of many diseases within the limits of this not very large volume, and to do the work well. Diseases of the blood (ten diseases), diseases of the spleen (nine divisions), and diseases of nutrition (seven heads) occupy 98 pages. The rest of the 402 pages is taken up with Infectious Diseases, which include ten exanthemata; rheumatism in variety; three diseases involving the blood; three diseases involving the respiratory apparatus; six diseases involving the digestive apparatus; the three venereal diseases; cerebro-spinal meningitis; tuberculosis and scrofula (under ten heads); a chapter on leprosy; about twenty pages on diphtheria, and a dozen pages on six zoonoses.

The book is an excellent abridgment of modern views; *e. g.*, in erysipelas the author advises, for the fever, antipyrin internally, 3 i to 3 iss by enema, and says that the best local application is carbolic acid 3 ss dissolved in ol. terebinth. 3 j, applied every hour. Antipyretic treatment of typhoid fever "with antipyrin is certain" (an enema of 3 j to 3jss in 3 ij of warm water), with wine in large quantities to prevent collapse. Of scrofula, Eichhorst says: "Koch first proved that scrofulosis is but a special clinical form of tuberculosis, and owes its origin and development to the tubercle-bacillus. The infection with tubercle-bacilli is needed to produce the disease."

POTTER'S MATERIA MEDICA, PHARMACY AND THERAPEUTICS, including the Physiological Action of Drugs, Special Therapeutics of Diseases, Official and Extemporaneous Pharmacy, etc., etc. By Samuel O. Potter, A.M. M.D., Professor of Practice of Medicine in Cooper Medical College, San Francisco; Late A. A. Surgeon, U. S. A.; Author of "An Index of Comparative Therapeutics," "Speech and its Defects," and the "Quiz-Compends" of Anatomy, Materia Medica, etc. 828 pages, uniform size with others of P. Blakiston, Son & Co.'s "Manuals." Cloth, \$3.00; leather, \$3.50. P. Blakiston, Son & Co., Philadelphia.

All the elements necessary to popularity are here. So carefully compiled and "boiled down," so thorough and complete in all its parts, so conveniently arranged for practical every-day use, that it is safe to venture the prediction that it will create a perfect

furor among medical students and practitioners. That the work is new and fully up to the times is evident from what is said of Antipyrine, Kairine, Antifebrin, Resorcin, and other recent additions to *materia medica*. Every drug and preparation official in the last edition of the U. S. Pharmacopœia has been fully noticed, while all prominent unofficial drugs receive such mention as their importance demands.

In detailing the physiological action of a leading drug, its characteristic qualities are first given, then its action in an ordinary medicinal dose, next the effect of small doses continued, and last, those of a toxic dose; antagonists, incompatibles and therapeutic application follow.

Pharmacy and Prescription Writing occupy Part II.

Special Therapeutics are treated elaborately in the third division of the volume, and constitute an index to the treatment of disease, according to the practice of the most eminent physicians, foreign and American. Tables of specific gravities and volumes, diagnostics, obstetric memoranda, Latin terms, doses, hypodermatic formulæ, metric equivalents, besides "Notes" on temperature and the clinical thermometer, poisons, urinary examinations and patent medicines, are placed in an Appendix.

The Index is very full, occupying 80 double-column pages, and is correspondingly valuable.

THE PRESCRIBER. A Dictionary of the New Therapeutics. By John H. Clarke, M.D., Edin., Ext. Mem. Roy. Med. Soc., Edin.; Physician Homœopathic Hospital, etc. Second edition, 207 pages, 24mo. London: Keene & Ashwell, 74 New Bond street. New York: Boericke & Tafel, 145 Grand street. 1886.

Under headings, giving the names of diseases or of anatomical parts, are grouped the names of remedies, with the indications for their selection. This book differs from others in specifying the strength of the medicine to be used, and the amount and frequency of the dose. Medicines are ordered in crude form, or in the "strongest preparation of the drug," and in all degrees of attenuation up to the sixth centesimal, and occasionally the twelfth or higher.

As showing the different views of "allopathic" physicians toward homœopathy, we print the following extracts from our exchanges:

"Every homœopath is a liar. He lies when he gives unmedicated pellets, but he is a still greater liar when he gives our con-

centrated drugs, and calls them homœopathic medicines.”—"Z. in *New England Medical Monthly*, Bridgeport, Conn., December, 1886.

"A good story is told of one of our leading homœopathic practitioners in New York city, by himself. He had been treating for some time unsuccessfully a case of Porrigio, when finally in despair he advised his patient to consult a well-known old school dermatologist, who had been interested in tablet triturations. Several weeks after this he met his former patient entirely cured. In conversation with his dermatological friend on a subsequent occasion he was curious enough to inquire what his treatment had been. 'Hepar sulph. internally,' was the answer. 'Why,' said our homœopathic friend, 'I gave him hepar myself.' 'What trituration?' 'Third decimal,' was the reply. 'Ah!' said the allopath, 'you didn't give it high enough; I give the sixth.'"—*The St. Louis Periscope*, September, 1886.

THE REVOLUTION IN MEDICINE, by the same author as above. 88 pages, 24mo. The seventh Hahnemannian oration, at London Homœopathic Hospital, Oct. 5, 1886.

POCKET MEDICAL FORMULARY. By Alex. Hazard, M.D., and Bernard M. Goldberg, M.D. Revised and enlarged by Ab. S. Gerhard, A.M., M.D., Professor of Pathology, etc., Medico-Chirurgical College, Philadelphia. 1,100 formulæ, and appendix of tables, etc. Address Dr. Goldberg, 1208 Chestnut street, Philadelphia.

Special features: Alphabetical arrangement; patent index; compact form; flexible binding; extra blank leaves to record your own formulæ, already indexed. Over four hundred authorities, American and foreign.

EXCHANGES, PAMPHLETS, ETC.

The *Albany Express* has at different times kindly printed a review of the ALBANY MEDICAL ANNALS, for which favors it has our thanks.

The *Journal of Comparative Medicine and Surgery*, edited by W. A. Conklin, Ph.D., D.V.S., of Zoological Gardens, New York city, and Rush Shippen Huidekoper, M.D., Veterinarian (Alford), Dean of Veterinary Department, University of Pennsylvania. 100 8vo. pages, quarterly, \$2.00 a year. A. L. Hummel, M.D., publisher, Philadelphia. The January number contains original articles on Tape Worm in Birds, by Prof. Joseph Leidy, M.D. LL.D.; Study of Sebaceous Cysts and Cutaneous Horns, John Bland Sutton, F.R.C.S.; The Microbe of Rabbit Septicæmia, Theobald Smith, M.D. (Albany Medical College, class of '83); Snake Poison—Chemico Physiological View, T. Wesley Mills, M.A., M.D., L.R.C.P.; Comparative Ophthalmology, L. Webster Fox, M.D.; Breeding and Feeding, A. S. Heath, M.D.; Lungworms in Sheep, N. S. Townsend, M.D.; "Barsati," or Atrophic Carcinoma, Richard W. Burke, V.S., A.D.V., besides many selections, etc.

Annals of Surgery, J. H. Chambers & Co., publishers, St. Louis, \$5.00 a year, is the only periodical in existence exclusively devoted to surgery. The best authorities in the world are contributors. The amount of matter furnished (aside from the fact that it is the very best) makes it a low-priced journal.

The *Annual of the Universal Medical Science* will present at the end of each year a report of the progress of every branch of medicine. "Corresponding Editors" have been appointed in all countries with which postal communications exist. There will be about one hundred and fifty corresponding editors and sixty-four associate editors. The work will consist of five royal octavo volumes of about five hundred pages each, fully illustrated with wood-cuts, colored plates and maps. Among the gentlemen who have so far accepted associate editorships, the following may be mentioned: Drs. A. L. Loomis, J. Lewis Smith, Francis Delafield, F. N. Otis, E. C. Seguin, Wm. H. Thomson, Paul F. Munde, Lewis A. Stimson, E. L. Keyes, E. C. Spitzka, A. L. Ranney and D. Bryson Delavan, of New York; Wm. L. Richardson, F. W. Craper and Chas. S. Monot, of Boston; N. S. Davis, of Chicago; P. S. Conner and James T. Whittaker, of Cincinnati; Nicholas Senn, of Milwaukee; John B. Hamilton, of Washington; Hunter McGuire, of Richmond; John Guiteras, of Charleston; Albert L. Gihon, of Mare Island, Cal.; Christopher Johnston, of Baltimore; William Pepper, D. Hayes Agnew, William Goodell, Theophilus Parvin, Joseph Leidy, William Thomson, J. W. Holland, Richard J. Dunglison, J. Solis Cohen, James Tyson, William S. Forbes, A. Van Harlingen, E. O. Shakespeare, G. W. Garrettson, of Philadelphia. The price of the *Annual* is \$15 per set, per year, free of express charges. Chas. E. Sajous, Chief Editor, 1832 Chestnut street, Philadelphia.

The Chicago Medical Journal and Examiner. Editor. S. J. Jones, M.D., LL.D., with Collaborators in Chicago, Milwaukee, Washington, D. C., U. S. Army and U. S. Navy. 96 octavo pages, monthly, \$3.00 a year. The Chicago Medical Press Association.

The Medical Register, Vol. I., No. 1, Philadelphia, Feb. 19, 1887. 48 royal octavo pages, weekly, \$3.00 a year. Editors: John V. Shoemaker, A.M., M.D., Wm. C. Wile, M.D.

The Southwestern Medical Gazette, Louisville, Ky., Vol. I., No. 1; 32 double column pages, \$1.00 a year. M. F. Coomes, A.K., M.D., and J. B. Marvin, B.S., M.D., editors.

The Minnesota Medical and Surgical Journal (formerly the *New York Medical and Surgical Journal*). Edward N. Fishblatt, M.D., Editor, late Professor of Dermatology and of Diseases of Genito-Urinary Organs, Atlanta, Ga., Medical College; Assistant Editor, W. Elmer Hubbard, M.D., Rush Medical College, Chicago. Octavo, monthly, \$1.00. Minneapolis. Minn.

The Medical Current. W. A. Chatterton & Co., publishers, Chicago; 32 octavo pages; \$2.00 a year.

The Health Record, Corning, N. Y., the first "Movement Cure" journal published in America. 50 cents a year, quarterly, 32 8vo. pages.

The Marvelous Library, Philadelphia, semi-weekly, \$5.00.

"The Relative Influences of Maternal and Wet Nursing on Mother and Child." Joseph Edcil Winters, M.D., New York. From *The Medical Record*, Nov. 6, 1886.

"The Treatment of Uterine Flexions." Virgil O. Hardon, M.D., Atlanta, Ga. From the *Atlanta Medical and Surgical Journal*, December, 1886.

"An Epitome of the Newer Materia Medica." 76 pages, 8vo., contains much valuable information not always found in a physician's library. A paper-bound copy will be mailed without charge to any physician applying for the same to Parke, Davis & Co., Detroit, Mich.

"Tubercular Consumption: Is it Ever Cured?" Read at the second annual meeting of the New York State Medical Association, November, 1885. By Henry D. Didama, M.D., Professor of the Principles and Practice of Medicine at Syracuse University.

"Tubercular Consumption: Introduction to a Discussion at the New York State Medical Association, November, 1886. By H. D. Didama, M.D., Syracuse, N. Y."

"On Certain Mooted Pointed Points in Gynecology." Thomas Addie Emmett, M.D., Surgeon to the Woman's Hospital of the State of New York. From *British Medical Journal*, Nov. 18, 1886.

"Annual Report of the Supervising Surgeon-General of the Marine Hospital Service of the United States."

"Rhinology in the Past and of the Future." American Rhinological Association, St. Louis, Oct. 5, 1886. Carl H. Von Klein, A.M., M.D., Dayton, O. From *Journal A. M. A.*

"Report on Diseases of the Rectum." Jos. M. Matthews, M.D., Kentucky State Medical Society, 1886.

"Sterility," "Management of the Secundines." William H. Wathen, M.D., Louisville, Ky. From *Southwest. Medical Gazette and Jour. A. M. A.*

"Novel Methods of Treating Diseases of the Middle Ear." Seth S. Bishop, M.D., Chicago. From *Journal American Medical Association*.

"Positive Medication." Alkatrits, Alkametric Granules, Alkadermic Pellets, Alkassayed Fluids. Frederick Stearns & Co., Detroit.

"Follicular Amygdalitis." A. Jacobi, M.D., President of the New York Academy of Medicine. From *The Medical Record*, Nov. 27, 1886.

"President's Address. Tenth Annual Meeting of the Detroit Medical and Library Association. By C. J. Lundy, A.M., M.D., Oct. 4, 1886."

"Researches in the Etiology of Dengue." J. W. McLaughlin, M.D., Austin, Texas. From *Journal of American Medical Association*.

"Ueber Wirkung, therapeutischen Werth und Gebrauch des neuen Karlsbader Quellsalzes nebst dessen Beziehung zum Karlsbader Thermalwasser, Von Dr. W. Jaworski, Universitäts-Dozenten in Krakau, (im Sommer in Karlsbad). Klinisch-experimentelle Untersuchungen aus der mediz. Universitätsklinik des Prof. Korczynski in Krakau, Separatabdruck aus Dr. Wittelschoefer's "Wiener Mediz Wochenschrift," Wien 1886, Selbstverlag des Verfassers.

MEDICAL SOCIETY OF THE COUNTY OF FULTON.—At the last annual meeting the following officers were elected: President, John Edwards, Gloversville; vice-president, David V. Still, Johnstown; secretary, Peter R. Furbeck, Gloversville; treasurer, Isaac de Zouche, Gloversville; censors, D. S. Orton, Northampton; Eugene Beach, Gloversville, and John E. Burdick, Johnstown; delegates to the Montgomery County Medical Society, Drs. Orton and Burdick; delegates to the Schenectady County Medical Society, Drs. Furbeck and Beebe; delegates to the Albany County Medical Society, Drs. de Zouche and Cameron. The retiring president, Dr. T. D. Smith, Broadalbin, read a valuable paper on "Dietetics." The Society adjourned to meet in June at the residence of President John Edwards, in Gloversville.

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A PAPER ON DIATOMACEÆ.¹

BY T. F. C. VAN ALLEN, M.D., ALBANY, N. Y.
(ALBANY MEDICAL COLLEGE, 1882.)

The subject which it is my intention to bring to your notice this evening is one rather out of place, perhaps, to introduce to an audience of medical and surgical tendencies, and upon an occasion that has always been devoted to the discussion of subjects created by these tendencies. But I may say that all that may claim the nature of a science should be of interest to our profession, and even so sage a body as this may deign to be willing to be amused, if not instructed, at rare intervals. Again, it is rather difficult for me to present a paper upon those departments of medicine and surgery occupying my attention which would be of general interest.

Our president, when evolving the committees of this year, evolved a new one of microscopy. As a member of this committee, I will offer this paper to the society, as an appreciation of the honor of serving upon this new and commendable division.

Probably the average physician knows as little about diatomaceæ as of any of the departments of microscopy. While this

¹ Illustrated by photo-micrographs thrown upon the canvas by stereopticon, before the Medical Society of the County of Albany, Wednesday evening, February 23, 1887. The publishing committee regret their inability to publish reproductions of the forms exhibited. The introductory portion of this lecture was printed in the Albany Press and Knickerbocker, February 27, 1887.

department may be of the very least importance to him, yet it cannot be denied that it is the most entertaining and wonderful. And while commenting upon the general ignorance of so many upon the subject, it may be well to explain that my own knowledge is akin to this same ignorance, and my presenting a subject I know so little about can only be accounted for by explaining that a measure of success in taking photo-micrographs of various diatoms has been pleasing to me, and I felt sure that it would be a gratification to you to look upon some of the results, as well as to notice the beautiful contour and markings of the diatomous frustules.

A diatom is defined by Carpenter as "a simple cell having a firm external coating, within which is included an endochrome whose superficial layer constitutes a primordial utricle; but their external coat is consolidated by silex, the presence of which is one of the most distinctive characters of the group, and gives rise to the peculiar surface markings of its members." A shorter definition—more readily assimilated, if not so concise—might be: A monocellular alga whose endochrome is coated with, and permeated by, silex.

The propriety of calling diatoms vegetable has been frequently disputed, but the testimony of the best observers places them within this kingdom.

The mode of growth, or increase, is by self-division, and this, under favorable surroundings, is so constantly going on that examination, under the microscope, of living gatherings shows a large proportion undergoing this division. Many forms are found connected, forming rods, zig-zag chains, spirals, and so on, this being due to the aggregation of growth remaining coherent.

The structure may be further explained by stating a diatom to consist of two silicious valves, very similar in conformation and markings, applied to each other, edge to edge, leaving a suture of junction and enclosing a space of variable size and shape, which contains the cell-contents. The outlines of these valves are remarkable—no form too regular or beautiful, none too irregular or ridiculous; and the markings of the shells vary from those very evident under low power, to those so fine and delicate that our best objectives are required to decipher them.

The sizes of these microscopic cells differ greatly. We may state the largest to measure the one-seventy-fifth of an inch in

greatest dimension, and the smallest—well, I do not know where to place the limit of their minuteness.

The living forms are usually coated with a gelatinous material, so that little but their outline can be seen, and it is this appearance they present when a drop of diatomous water, from a roadside ditch, is placed under the microscope. In this you can study their division and their movement—for diatoms can move, or better, *do* move; this is attributed to a current within the protoplasmic cell's contents.

What will interest us the most are the markings and contour of the silicious shells, or valves. To see these, the endochrome must be bleached or dissolved out, and the cell freed from adhering material.

Where diatoms may be found is as lengthy a proposition as one considering where they are not. The green or brown scums upon the pools, ditches, canals, etc., is often made up of little else than diatoms. The water-plants of our lakes and streams, and the sea-weeds of the ocean, are frequently studded with them. The stomachs of fishes and bivalves; the surfaces of floating timber; the mossy rocks beneath the water of the rivers—all these yield living forms; while the sediment of these waterways yields, as well, the valves that have served their day and generation. These are the recent forms; but we have the remains of previous ages to delight our researches, and the numerous fossil deposits found all over this earth show us forms of the indestructible siliceous shells which have retained their distinctiveness and beauty for the last hundred thousand years or more. These fossil deposits belong to the tertiary period; those of the Atlantic states may be classed with the miocene portion, while of the Pacific slope—not quite so old—with a time preceding the Plutonic.

As we find our ubiquitous diatom a frequenter of both marine and fresh water, so we find the fossil deposits giving evidence as to whether the sediment was from marine or fresh-water sources.

While diatoms can scarcely be called makers of continents, yet they have done considerably toward their building. From Maryland southward they underlie quite a strip of the soil of the Atlantic states; and westward, the Californian coast, from state to peninsula, with its sheltering Coast-Range mountains, owes much to the long-ago endeavors of the myriads of little diatoms.

The localities at which these deposits have been reached and

materials of notable richness procured are very numerous. Mention of a few may be of interest: Lake McIntosh, Nova Scotia; Saco, Maine; Troy, New Hampshire; Providence, Rhode Island; Nottingham and Cambridge, Maryland; Richmond, at Church Hill Tunnel and outside the city, in Virginia; Santa Monica, Monterey, San Francisco and Lake County, in California; Virginia City, Nevada, from which deposit is ground the Electro-Silicon, so much used in household cleaning; the island of Jutland, Denmark; Oran, Algeria; Moran, Spain; Simbirsk, Russia; Mourne Mountain, Ireland; Black Moss, Scotland; and Talbot, Australia. These are merely mentioned to give an idea of the distribution, for there are hundreds of other localities furnishing just as notable material.

Another class of materials, which can scarcely be called fossil, is the lacustrine sedimentary deposits, and among these we may notice the bergmehl of Norway, Sweden and Lapland, so called from being used by the poor of these localities to mix with their scanty supply of flour, though this diatomous earth would seem to contain little or no nutriment. Another source of diatomous remains is found in the various guanos, and from these many otherwise unobtainable forms have been secured. Of course, these sources supply material mixed with more or less other matter, which must be separated before we can examine the diatoms, and a few remarks upon the processes of cleaning will be of interest.

Gatherings of recent and living forms can be cleaned very satisfactorily by a method known as elutriation, viz.: Taking advantage of the fact that diatoms are lighter than sand and much of the other substances, and when the material is thoroughly shaken up with water, allowed to settle for a few seconds, the water then poured off, leaving behind the sediment of sand, etc., that had settled, this water will contain most of the diatoms; this is now subjected to repeated agitation and pouring, gradually increasing the interval of subsidence; after this, boiling the remaining sediment in a strong solution of bicarbonate of soda, and then washing it repeatedly. A method of gently rocking a shallow dish containing partially cleaned diatoms and water, so as to produce a circling current, causing the lighter material to seek the outer circles of the vortex, while the heavy sand would occupy the centre, was suggested and is carried out by Dr. George Taylor, of Mobile, Ala., and a phial of material cleaned

in this way, which he most kindly sent me, gives beautifully clean mounts. The fossil deposits and the guanos yield most readily to boiling acids—nitric, sulphuric and chlorhydric, used in the order named, sometimes stopping with one, often using all three, one after the other, and aiding their action by adding small fragments of bichromate of potassium to the boiling fluid, to aid in loosening the flocculent matter and to bleach the frustules. The object of this acid boiling is to break down the mineral and organic matter, that it may escape as gas or be rendered soluble in water. After boiling, repeated washing in water must be resorted to, to remove all that is dissolvable, also the last trace of acid. This manner of cleaning gives good results, after some practice, but it is very laborious and the acid fumes very disagreeable. All this goes to show how durable silica is, yet we must not forget that strong alkaline solutions destroy it.

After cleaning, the material is kept in fifty per cent. alcohol, and mounted by placing a drop or two of the solution, with the suspended diatoms, upon a cover-glass, spreading it out evenly, and evaporating to dryness over an alcohol flame, leaving a film of diatoms dried upon the cover. It is well to use plenty of heat after evaporation, letting the cover-glass grow red-hot, destroying thereby the last traces of organic matter, as suggested by Prof. Smith, of Geneva, N. Y. The cover is then mounted upon a slide, dry, or in whatever media may be thought suitable. Now, to speak of the markings of diatoms. It will be seen from the proposed illustrations that these offer a great variety of arrangement. The coarser markings are self-evident, but the finer may be interpreted according to the magnification and the mode of illumination. The markings that appear as fine striæ, often, under greater enlargement, become rows of minute dots; the valves that seemed without regular markings show striation or punctuation under better defining power and illumination. It is pretty generally admitted that these dots, or beads, are the ultimate resolutions of the sculptured shells. In fact, the fairly successful attempts at manufacturing diatoms by deposits of the fluorides of silica, show this same beaded arrangement.

It has not been attempted to give even so much as an elementary paper upon this subject, but rather to preface the illustrations, which are the burden of the evening.

The transparencies are direct contact prints from negatives taken by the micro-camera upon dry plates, and the magnifying

power used has been from 250 to 1,200 diameters. To explain the methods pursued in photographing would require too much time, and in one sense, is foreign to our subject. No attempt has been made to arrange the photos progressively, so as to convey any special lessons of growth, genera, etc.; but they are simply views of forms which I have photographed for their beauty, rarity or peculiarity, and these transparencies have been made as a secondary consideration. Many of the most beautiful negatives have not been used, because their size is too great for lantern slides, and time too much of an object to admit of their reduction. The enlargement by stereopticon is fifty diameters, so that the pictures upon the canvas must be mentally reduced to one-fiftieth of their diameter to convey a correct impression of the size of the photographs. And here I will explain to such persons as may be unfamiliar with microscopic terms, that by diameters we do not mean magnified so many times, but, for example, an object measuring one-fiftieth of an inch in diameter, when enlarged to one inch, is magnified fifty diameters, not times; for this would be areas, and in this case would amount to fifty times fifty, or 2,500 times. It will be well to remind you that a photo magnified to this great size is very different from a diatom itself so magnified; so it must not be supposed that a diatom so enlarged, if it were possible, would present this same resolution of its markings.

It will be attempted to give the names of the forms, so far as identification has been successful, and it is not to be doubted that imperfect knowledge will be responsible for a few errors. The nomenclature of the diatomaceæ is a miry soil to plough, at best. But little regularity has been used, and the same forms have had repeated christenings. It simply proves that naming after fancied resemblances is unsatisfactory and unscientific. The divisions into genera receive one designation, and this is followed by a word, or words, descriptive of the variety, or frequently the name of some notable person, or the discoverer. In this manner a number of thousand diatoms have been discovered and named. One source of error has been due to not considering the markings of the inner surfaces of the valves. The valves separating from each other and presenting their differently marked inner surface to view, have received a separate name. The titles have been taken from the Greek and Latin.

To save the annoyance of repetition, the statement is made

that the majority of the photos are magnified 600 diameters; this multiplied by fifty, the further enlargement by the stereopticon, would make them appear upon the canvas increased 30,000 diameters. Where the magnifying power is other than 600 it will be so stated.

1. I thought it would be well to show a low-power photograph that would convey an idea of how a slide of mounted diatoms appears under low magnification. This is not, properly speaking, a transparency, but a negative. It represents a field of well-cleaned, closely-mounted diatoms from the recent Gulf of Mexico soundings at Tampa Bay, Fla.

2. The first genus which we will consider is the *navicula*, so called from its resemblance to a "little boat." This division is a large and well-marked one, associated with both fresh and marine water, and both recent and fossil material. The transparency is one of the first I made, and scarcely does this *navicula marina* justice.

3. We have here *navicula crabro*, magnified 425 diameters, from the fossil material procured at Santa Monica, Cal. It is named from its wasp-like form, and is a very common specimen to find in many of the fossil deposits, and also much of the recent marine material—not, perhaps, this same typical form, but others very similar in this respect, if not in name.

4. This is *navicula lyra*, and of a very fair photograph taken from a mount of Gulf of Mexico material. Under lower power, or inferior illumination, these markings appear as simple striæ, but under four or five hundred diameters these striæ resolve into rows of dots.

5. This is a form of *navicula* from Santa Monica, Cal., enlarged 850 diameters. The markings under careful focussing are seen in part as beads. I have not identified it with certainty, but would regard it as a variety of *navicula lyra*.

6. From the fossil material of Nottingham, Maryland. Sufficiently like the the last to receive the same name, but known as a form of *navicula spectabilis*. A good photograph; shows the beads upon portions very well.

7 and 8. Those now upon the canvas are two forms of *naviculæ*, the upper from guano from Pabellon de Pica, the lower, a recent marine form from the Samoan or Navigators' Islands, called *navicula yarrensis Grunow*.

9. This is a new form, named by its discoverer, Mr. C. L. Petcolas, of Richmond, Va., *navicula disciformis*. It is a fossil marine form, and seems to appear only in material that was procured during the drought of 1879, when the wells in the vicinity of Cambridge, Maryland, were deepened by drilling. The drill in some instances passed through this diatomous strata, and thus the material was secured. It is certainly one of the most peculiarly contoured and marked diatoms we meet with.

10. This slide is one of some merit, and shows one-half of a form known as *navicula rhomboides*. This diatom is one of the most satisfactory of the test diatoms, and it requires a very good one-fifth or one-sixth to see the striæ. With higher power these rulings can be resolved into rows of not over-distinct beads. The photo was taken with a one-tenth water-immersion objective, and magnified 1,200 diameters. The striæ of this specimen are about 70,000 to the inch.

11 and 12. Our next consideration will be the genus classed as *triceratium* (or three-horned). The slide shows two varieties, the one to the right a variety of *triceratium Weissii*, and to the left *triceratium insipiens*. Both are from Simbirsk, Russia, and were taken at one exposure. It is unusual to find two such perfect fossil diatoms in the same field, and in the same focal plane. The fossil material from Simbirsk is remarkable for the preponderance of this genus.

13. This beautiful form is from Simbirsk, known as *triceratium nobile stellen*.

14. To me the most beautiful of the group is this variety of *triceratium Weissii*, from Simbirsk. Under the microscope the markings within the circular centre seem like resplendent gems.

15. An oddly marked form from Simbirsk, *triceratium curvato vittatum*.

16. Another from Simbirsk, seeming to show a smaller triangle overlying a larger. It is distinguished by a rather indigestible word derived from the name Archangel.

17. The last one of this genera we will show is rather a contradiction in name—a five-sided form of a three-horned diatom. It is from a recent gathering from the Samoan Islands, and is called *triceratium formosum pentagonalis*. It may be of interest to mention that this photo was taken with a twelve-dollar student's series objective.

18. We will show two specimens of the genus *auliscus*. The first is an embossed variety, known as *auliscus cœlatus*, from Samoan Islands—a beautiful diatom, but so faint as to render it difficult to procure a good photograph.

19. The frosted variety known as *auliscus pruinosis*, from Gulf of Mexico, will be a more satisfactory representation. The genus is not a large one, but contains a number of very beautiful varieties.

20. The group *aulacadiscus* is a variable and in many instances beautiful genus. This form, *aulacadiscus orientalis*, is, by some, considered the most beautiful of diatoms. The transparency is a very good one, and from a photo of a specimen from the Sandwich Islands.

21. The markings of this group vary considerably; it is rather the exception to find two similar specimens. This one, you notice, is quite different in margin and number of radiations, yet it occupied a very neighborly position upon the same slide as the previous one, and I think can be classed as but a variation.

22. The genus *eunotia* is a rather pretty division. This is *eunotia serra*, a recent fresh-water specimen from Hammonton, New Jersey. The mounts of the material from Lake McIntosh, Nova Scotia, and Saco, Maine, show it in great abundance and variety. The number of serrations vary, and the names are applied somewhat in accordance—two points, *eunotia diodon*; three, *triodon*, etc., up to seven, which is *eunotia diadema*. Those with more than seven (and they can be found with twenty-four) are all included in the term *serra*.

23. The distinguishing features of the *eunotiæ* are unequal sides, one convex, one concave, without central umbilication; so this group, *epithemia*, might be considered but a subdivision. The one shown is from the fossil earth of Pay-de-Dome, in France, and is called *epithemia granulata*.

24. This is *epithemia turgida*, a very common form; it was photographed from a mount of Puget Sound. The slides of Puget Sound are remarkable for showing fresh-water and marine forms side by side.

25. We will now consider a beautiful group of diatoms included under the name *actinoptychus*, which might be translated to mean "pleated folds." The first is a variety of *actinoptychus splendens*, called by Grunow, *halionyx*. It is from the Gulf of Mexico, as are the two to succeed it, consequently marine and recent.

26. I have not been able to identify this beautiful *actinoptychus*.

27. Neither have I been able to identify this one, which differs only in having sixteen rays, in place of fourteen.

28. *Actinoptychus Gründleri*, from the fossil deposit of Santa Monica, Cal.—one of the most beautiful forms met with.

29. At this time of European agitation it will be pleasant to renew your memory of an uncrowned ruler; this is *actinoptychus Bismarckii*. Unfortunately for the resemblance, this came from Santa Monica.

30. From Cambridge, Maryland. Found plentifully in many of the fossil deposits. *actinoptychus undulatus*.

31. A sub-division of the *actinoptychus* known as *heliopelta*, or "sun-shield." Found plentifully in the Nottingham fossil earth; usually having six, eight, ten or twelve rays, but occasionally more. This shows an eight-rayed form. The group has been called *actinoptychus excellens* by some German diatomists, but it is regarded as a well-marked division, and the name *heliopelta* as worthy of retention.

32. I spoke of an inner view of the valves differing in appearance from the outer. This, I think, may be called a view of the inner plate of the preceding form.

33. While we cannot assert that diatoms suffer from deformities of accident, or of inheritance, yet we occasionally find an irregular specimen. This, as you notice, is neither six nor yet eight rays, and is quite an odd variation.

34. My most satisfactory photographs of the *heliopeltæ* are so large as to be unsuitable for lantern slides. On this account, I, a few evenings ago, was searching for a good specimen of a ten- or twelve-rayed form, from which to take a smaller photograph. My search resulted in finding this abnormality, somewhat similar to the previous one. It also has the merit of being a very good photograph. It is magnified 250 diameters.

35. This is a fourteen-rayed *heliopelta*, the only unbroken specimen I can remember having seen—not a very perfect one nor a very perfect photograph, but I show it as somewhat of a curiosity. It is magnified 250 diameters.

36. We will have two representations of the genus bearing the musical name of *melosira*. The first is a variety of *melosira sulcata*, known as *coronata*. It is the same diatom as the *gallionella coronata* of Ehrenberg. This is a recent marine specimen from the Gulf of Mexico, magnified 1,200 linear.

37. Another variety of *melosira sulcata*, known as *Siberica*, from the fossil material of Simbirsk, Russia. The most beautiful form of *melosira*.

38. This beautiful form is called *coscinodiscus excavatus*. Unfortunately it is difficult to find a perfect unbroken specimen. This is from the Cambridge well material, and gives a fair idea of it.

39. The genus *surirella* includes many curious forms, also many diatoms used as tests. A favorite test among German microscopists is *surirella gemma*. The one shown is from the Samoan Islands, and may be called *surirella fastuosa*.

40. A form found in great perfection and abundance in the recent Gulf of Mexico material is *eupodiscus radiatus*. It shows some variations in size, and may have five instead of four of these loop-like processes. It is magnified 250 diameters.

41. *Cocconeis costata* is, in this instance, from Santa Monica, Cal., and is magnified 1,200 diameters.

42. For the privilege of showing a transparency of this diatom I am indebted to Mr. Petcolas, of Richmond, Va. I photographed it for him, at his request, from a slide of Calvert county, Md., fossil material, which he has in his possession. He writes me that he has looked for years for another specimen, and has failed to find one, and as the literature fails to describe it, it is fair to regard it as absolutely unique. He has provisionally called it *chypus mirabilis*, or "wonderful shield."

43. This specimen represents a variety of the star-centered genus *asteromphalus*, and its variety is further defined by *arachne*, or "spider-web." Photographed from a cleaning of guano.

44. This is a pretty little form from the same material as the preceding, magnified 1,200 diameters. I have not been able to identify it.

45. This is an odd combination, from Nottingham, Md., which

I think might be called *asterolampra Marylandica*—a very frail form, difficult to find a perfect specimen.

46. Here is a sudden transition in shape. It belongs to the genus *gomphonema*, a group of some four hundred varieties. This specimen from Saco, Me., a fresh-water fossil deposit, and may be named *gomphonema acuminatum*.

47. This is a beautiful specimen of the genus *arachnoidiscus*, or "cob-web disc." This form has been named *arachnoidiscus Ehrenbergii*, after one of the pioneer diatomists, Prof. Ehrenberg. It is a large diatom, this being magnified only 250 diameters.

48. A form that seems more beautiful to me every time I examine it is this *actinocyclus Ralfsii*. This specimen is from Nottingham, Md. It is found in all the Maryland and Virginia fossil material.

49. An inner plate of a variety of *stictodiscus*, from a mount of the recently-found fossil deposit at Oamaru, New Zealand.

50. This form I am uncertain regarding its genus and variety. It was photographed from a slide of Nottingham, Md. I am certain it is not common in this material. It looks considerably like *endyctia oceanica*.

I have reserved until the last any attempt to answer that worn-out and thoughtless query, "What's the good of diatoms?" The question reminds me of one asked Cobbett, the gardener, as he was bending over his cherished flower-beds, "What's the good of flowers?" and his reply, "What's the good of any thing?" In framing the answer, we will commence with medicine. Silicia is a most useful medicine, according to homœopathic practitioners, and certainly the beadings of diatoms are sufficiently attenuated. Why not an elegant prescription of the future be a moderately sized *coscinodiscus*, or *asteromphalus* (according to the patient's idiosyncrasies) *t. i. d.*?

The present degree of perfection of our microscope objectives owes much to diatoms and diatomists; and had it not been for the requirements of the diatoms and their observers, I question very seriously if we to-day would be able to gaze admiringly upon the graceful tail of the bacillus.

Geologists have not yet made all the possible use of these diatomous deposits that future requirements may prove advisable and serviceable.

The manufacturers of Electro-Silicon have proved the diatoms to be the only good polishing powder made.

Then, they entertain so many who otherwise might engage in still less useful employment.

As for me, I can call serviceable whatever is beautiful; and whatever improves our perceptions, educates our vision and refines our ideas, is certainly useful.

We are apt to be too much occupied with the thought that "God's noblest work is man," to comprehend that he has created other noble features—too apt to regard ourselves as *the* refined

existence. Cannot our real coarseness be made self-evident when we examine the wonderful refinement that this same Almighty has created in the very lowest forms of life?

To close my paper on this subject, I wish to acknowledge my many indebtednesses. The literature I have been able to refer to has been limited—"Schmidt's Atlas of the Diatomaceæ;" Carpenter on "The Microscope;" three articles upon "Diatomaceæ" by Profs. A. Mead Edwards, Christopher Johnston, and Hamilton Smith; and a few of the current journals of microscopy. In naming the forms, I have received a great deal of aid from Mr. C. L. Peticolas, of Richmond, Va. In my efforts to discover something of the meaning of the various names given to these little cells, our president, Dr. Hale, and Dr. Bigelow have unpacked their classic lore. Thanks are also due to Dr. Southworth for so kindly contributing his excellent apparatus and his assistance; to my audience for their kind attention; and last, but by no means least, to Mr. McCarty for the unusual consideration which he has shown, in furnishing so much of the gas.

BAKED BEANS:

A SERIO-HUMOROUS MEDICAL PAPER.

BY EPHRAIM CUTTER, M.D., NEW YORK CITY.

[FOR ALBANY MEDICAL ANNALS.]

Ethics, Chemics, Morphologies, Pathologies and Culinary Ethics.

It is curious that the term "Beans" is a standard of ethical knowledge. For example, I have known boys and men to say of a person, most likely a new-comer who proved to be unusually ignorant of the local manners and customs of their neighborhood, in a sneering way, "That fellow don't know beans."

This means that the person in question was almost *non compos*. Why intellectual, mental and moral capacity should be connected with beans is difficult to explain, as a good many other customs are. It is more difficult to explain why the same article of food has been humorously connected with æsthetic culture, since the science of æsthetics deals with sight and sound only; there seems no reason why it should not include taste, because mankind, as far as possible, selects food by the pleasurable taste of the article in question, and because the delight and pleasure found in food comes closer to life than music and the fine arts. People

can live without music, sculptures and paintings, but not without eating. Surely all food should be judged not on the ground of tasting good, looking good, smelling good, or because it is an ethical food (that is, a conventional food for a certain locality, class or race of people). It is wise to select food on these grounds, but not on these alone; because what is sweet to the taste, savory in smell, beautiful in looks and an ethical food may not contain—

(a.) Chemical elements enough for a good food.

(b.) Its form (morphological) elements may be such as to resist more or less thoroughly the digestion, and thus not be a good

(c.) Physiological food, but be

(d.) A pathological food, or one which causes, sooner or later, chronic or acute diseases.

Can the average man who is very hungry for food be attracted by the delights of the eye or ear? To be sure, these are found in a first-class banquet, in order to make the pleasures of the occasion complete. The arts of architects, painters, florists, upholsters, drapers, gold, silver and iron smiths, potters, glass workers, tailors, dressmakers, hair-dressers, perfumers, jewelers, sculptors, musicians, and after-dinner speakers are added to the arts of confectioners, caterers, cooks and waiters, to charm the eyes, ears, tastes and olfactory nerves of the guests; and when all these are harmoniously and fittingly combined, the result is what may be termed a supreme effort to gratify the love of the beautiful and to make the occasion memorable because the bodies and souls of the guests have been so pleasantly influenced from so many different points of æsthetic contact.

It must be admitted that eaters of "Baked Beans" (when well cooked) get a pleasure without the above additional attractions. Culture has been mentioned in connection with this article of diet. It goes as a jest that the modern Athens is indebted to *baked beans* for its high intellectual standing!—perhaps on the ground that beans are rich in phosphoric acid and that the same element is found in nerve tissues. The more highly organized the nerve tissues, the better brain-work will they produce. Be this as it may, we cannot go quite so far as the opinion we heard expressed lately, that "this article of New England diet may explain the abundant crop of 'isms' and novel ideas in social and political economy, theology and mechanics; that were a high wall

built up round about New England to shut out the world, the inhabitants would perish from their own conflicts of new ideas and the baneful effects of mal-nutrition ; that emigration has been a conservant power, breaking up old habits of living and hence introducing a closer adaptation to the ordinary intellect and body." We quote this not in approval, but to show how this class of people appears to an outside thinker who does not follow the same lines of diet as to *legumes*.

However, it must be said that canned beans are shipped to all quarters and Boston baked beans are advertised freely, showing that emigration does not kill the love of them. A traveler all over the Union remarked in the cars, a short time since, that wherever he goes in Kansas, Nebraska, Idaho, Dakota, etc., and finds a Boston lady keeping house, he was sure to find baked beans prepared in the conventional style. During the war, in 1861, the New England troops were not satisfied until baked beans were put on the army ration. No æsthetics in baked beans! They are liked because they excite pleasure in eating. The eaters anticipate their pleasure, and make more talk about them than of any other article of food. It is doubtful if any amount of persuasion could induce them to give up beans, even if proved to be deleterious, an exciting cause of consumption, and the diseases that arise from imperfect digestion. Indeed, if the gentleman who expressed the opinion above quoted were to take it "down east," he would have a hard time, from the very fact that he would touch a tender chord. To show the truth of this position the following is quoted from the *Boston Commercial Bulletin*, February 12, 1887, from an article entitled "Forefather's Food—Poetry and Pork": "Nine (9) million pounds of canned baked beans annually consumed in this country, of which Boston packs 70 per cent."

A sample of baked beans poetry, four verses of which are taken from the *Baltimore Weekly Magazine*, October 13, 1818, is reproduced from a Chicago daily:

BAKED BEANS.

Oh! how my heart yearns for my own native land,
Where potatoes, and squashes, and cucumbers grow;
Where cheer and good welcome are always at hand,
And custards and pumpkin pies smoke in a row;
Where pudding the visage of hunger serenec,
And, what is far dearer, the pot of baked beans.

Let Maryland boast of her dainties profuse,
 Her large watermelons and cantaloupes fine,
 Her turtle, and oysters, and terrapin stews,
 And soft crabs, high zested with brandy and wine;
 Ah! never my heart from my native land weans,
 When smokes on the table the pot of baked beans.

The pot of baked beans! With what pleasure I saw it,
 Well season'd, well pork'd, by some rosy-faced dame;
 And when from the glowing hot oven she'd draw it,
 Well crisp'd and well brown'd to the table it came.
 O give me my country, the land of my teens,
 Of the dark Indian pudding and pot of baked beans.

The pot of baked beans! Ah! the muse is too frail
 Its taste to descant on, its virtue to tell;
 But look at the sons of New England so hale,
 And her daughters so rosy—'twill teach thee full well.
 Like me it will teach thee to sigh for the means
 Of health and—oh! rapture!—the pot of baked beans.

A YANKEE.

Poor "Yankee!" You lived half a century too soon,
 And pined in your loneliness for the loved dish;
 To-day, any grocer would sing a new tune,
 And give you the article just as you'd wish;
 And you every day could revive youthful scenes
 With Spriggins and Company's Boston Baked Beans.

"Canned beans are cooked as follows: After soaking and dosing with molasses and three or four ounces of best salt pork, they are sealed in a tin can; then heated to 250°–260° Fahrenheit in a closed steam retort. When removed the cans are pierced to let out the steam and afterwards resealed."

This mode is thought to be very effective, and a morphological examination by the writer shows the following:

Sample I. Boston Baked Beans, patented August 7, 1877, put up and warranted by the Grocers' Packing Company. The starch grains retained their form and polarized light as much as the sac of cellulose that contained them. Hence it is doubtful whether this mode of cooking is as effective as the old-fashioned way. These beans were put into a Chamberlain steamer and steamed for half an hour. The result was that the starch grains ceased to polarize light, but their forms were not destroyed.

Sample II. Packed by the Oneida Community, New York. Under microscope, the starch grains did *not* polarize the light and were distinct in form, though slightly changed, showing a better cooking than in Sample I.

Sample III. Riverside Farm Baked Beans, Portland, Me. "Every can guaranteed." Under microscope, starch grains polarize light and retain their raw form. I should advise more cooking for this brand.

The dangers of improperly prepared beans are touchingly set forth in the following contribution to baked beans literature in a California journal (see *Boston Commercial Bulletin*, February 12, 1887):

BOSTON BAKED BEANS.

The boy stood at the kitchen fire,
Upon it was a kettle,
Within its spacious, hollow sphere
A can of bright, white metal.

The can contained two pounds of beans,
The "What-you-may-call-it" brand;
The poorest, meanest kind of beans
That's in the market canned.

His father called, he could not go,
His face grew brighter still,
He watched the steam with happiness,
And never thought of ill.

There came a burst of thunder sound—
The boy—oh! where was he?
Ask of the steam that fragments left
Wherever one could see.

The water, kettle, boy and can
Of beans, the floor bestrew.
But when I tell the cause of this
You'll say he got his due.

The beans were cheap and poorly canned,
The can with gas was filled;
For fermentation had set in,
By which the boy was killed.

And so the boy has disappeared,
But in one sense remains,
And leaves a moral—"Use a brand
Of which no one complains."

This is more applicable when it is remembered how remarkably fond children are of this dish.

The English never eat beans, and call them "horse food."

Given a food that is good for man, (1) aesthetically, (2) chemically, (3) morphologically, and (4) physiologically, there is dan-

ger of its being a bad food unless it is properly cooked. This remark introduces a fact of incalculable moment in our day and generation—that the culinary department of life's work is one which may be made an engine of life or death. The difficulties which now trouble the kitchen, and the painful stories of girls and women starving over needle-work, in serving counters and other departments of ill-paid labor, calling on our compassion (for some find the path to moral ruin while at the same time there are plenty of kitchens calling for help), show the need of impressing the fact that kitchens are a greater source of power than the thoughtless cooks dream of.

Who are cooks? Our mothers, grandmothers and servant girls. Why should cookery be thought drudgery? It is one of the misnomers of Satan and designed to injure mankind. Any honorable labor which is necessary to the existence of the human race should not be deemed drudgery. Certainly cooking is essential to human existence, and hence a cook is not a drudge; rather, a cook is like air—a life supporter. Is there dishonor in this employment?

Again, a practical and indispensable acquaintance with subjects of the highest importance, which involve topics that have challenged the best intellectual talents of the savants of all ages, certainly is compatible with the highest dignity and grandeur that a human being can attain to.

If we refer to the physics and chemics of heat in cooking, we have such a subject, containing intricate, abstruse and hidden phenomena which have defied the scientific world. Count Rumford's fame comes from having done the most of any in this direction. He will be remembered not because he was a count, wealthy, clad in fine raiment, the pet of the nations, the associate of kings—although these things are not to be despised—but as the discoverer and demonstrator that heat is a form of motion, equally convertible. Besides, he was a cook. He did not dignify the office of cook; it dignified him; indeed, his culture was an ornament to his cooking. Every cook who does good work is in the same company as Rumford. Perhaps the greatest satisfaction one can take in life is the fact of having done something for somebody which has made him happy or done good to his physical existence by keeping his body in good condition so that he may in time do good to others. If cooks did but know it, they can take this satisfaction every time they broil a steak

properly, make good bread, tea, coffee, bake beans rightly, etc. They can feel that their services are of positive value, whether recognized or not, and entitle them to self-respect three times a day. Away, then, with the false notion that cooking is worse labor and more degrading than sewing and clerking on starvation wages! I once knew a man who kept a restaurant in Boston who retired wealthy because he made a specialty of baked beans properly cooked. Now, this man's success in life shows that the good quality of the cooking pays well. The same is true of other articles of diet. The Parker House at Boston was built up on the good quality of the bread, also the house of Smith and McNell of this city, which gives ten thousand (10,000) meals a day because of good cooking. This firm cooks potatoes so that the starch is changed into glucose, as I have proved by chemical tests.

The connection of food with æsthetics may seem to some far-fetched, but I assert that while a man's bowels wrestle in intestinal conflicts with illy or improperly cooked food he cannot be very æsthetic as to music and painting, from the physical impossibility of having his nervous system engaged in two such works; *i. e.*, first, difficult digestion, and second, æsthetic excitement. For a time the cerebral nerve centres might ignore the intestinal nerve centres, but as life can go on without cerebration and cannot go on without digestion, so the latter will triumph and claim attention, provided the cause (illy-digesting food) is not removed. On the other hand, a man kept warm with a stomach filled with a good, well-cooked dinner, will be an agreeable husband (so I have heard a good housewife say), and is in a condition to take delight in a concert room, or in a picture gallery, or in intellectual enjoyment.

CHEMICS.

The following tables are from Johnson's "How Crops Grow," O. Judd & Co., New York, 1881:

TABLE I.
Field Beans

Number of analyses.....	6
Per cent. of ash.....	8.45
Potash.....	40.50
Soda.....	1.20
Magnesia.....	6.70
Lime.....	5.20
Phosphoric acid.....	39.20
Sulphuric acid.....	5.10
Silica.....	1.20
Chlorine.....	2.90

Garden Beans.

Number of analyses	9
Per cent. of ash	8.06
Potash	44.1
Soda	2.90
Magnesia	7.60
Lime	7.70
Phosphoric acid	30.40
Sulphuric acid	3.80
Silica	0.80
Chlorine	0.90

TABLE II.

COMPOSITION OF 1,000 PARTS OF SUBSTANCE OF SEED BEANS (*PHASEOLUS VULGARIS*) COMPARED WITH WHEAT.

	<i>Wheat.</i>	<i>Field Beans.</i>	<i>Garden Beans.</i>
Water	143.00	141.00	148.00
Ash	17.70	29.60	28.10
Potash	5.50	12.00	11.05
Soda .....	.60	.04	.08
Magnesia	2.20	2.00	2.00
Lime .....	.60	1.50	2.00
Phosphoric acid	8.20	11.60	7.90
Sulphuric acid .....	.40	1.50	1.40
Silicon .....	.30	0.40	...
Chlorine .....	...	.80	.80
Sulphur	1.50	2.80	3.50

A glance at the analysis of wheat, which is *par excellence* a good food for man, which has stood the test of ages, and which is called one of the royal grains, shows that "beans" are a good food chemically, containing more mineral matter, and hence admirable from this standpoint of view as a food for the solid tissues, teeth, hair, bones, corneas, nails and epidermis.

But on this view alone we should not estimate the value of beans as food, any more than from the æsthetic point of view. One could get these chemicals, isolated in these proportions, and eat them, but it would not necessarily follow that the human system would assimilate them, even if they did not prove poisonous and destructive to life. As the mineral food of plants must be in soluble and assimilable forms, combined with carbon, hydrogen and oxygen—that is, in properly prepared manures (which are mainly soluble forms of mineral food), so must these same mineral and organic food-elements be prepared for man in morphological or form-elements which are so disposed and arranged as to be easily digestible—that is, easily broken down by the human digestive organs and easily assimilable. For if the tissues of the "beans," for example, are constructed to resist outside attacks, somewhat like an iron-clad, it is evident that no amount of chemical excellence will make them a first-class food

worthy of the high estimates placed on them in some quarters. This introduces the next point of view to take in testing a food, to wit:

THE MORPHOLOGIC.

Morphology of Beans.

Taking the bean botanically, it is the seed of the phaseolus species of the leguminose family. The seed is made of the germ and two lobes, called cotyledons, which are seed leaves loaded with starch to serve as food for the germ and for animals. The points of interest are :

The seed is covered with a thick skin or envelope, which is made up of a set of beautiful prismatic crystal-like shapes of cellulose placed side by side longitudinally, so that these ends make the outside and inside surfaces of the skin or envelope and

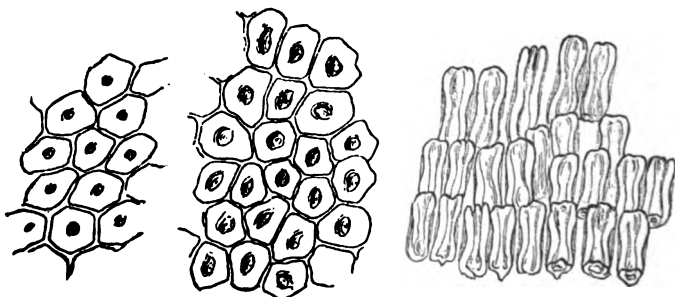


FIG. 1.

End and side views of the prisms of cellulose that make up the skin of the common white bean. Baked, but not thoroughly cooked.

appear very much like the tops of the Giant's Causeway crystals of trap-rock. See Fig. 1. The group to the right shows three or four rows of these cellulose bodies. They are displaced by the pressure of the cover and slide and appear to be end to end. In the middle of each prism is an hour-glass contraction which is in the central axis and is surrounded with clear cellulose which fills out the contour. To the left, two groups of the face of the outer bean-membrane are seen showing the prism ends in contact. The crystal-elements of the membrane are quite insoluble, polarize light, and resist the digestive influences of the alimentary canal. They are found in large quantities in the excrement of bean-eaters, and furnish a sure proof, when found, that beans or peas entered into the diet of the case under examination. In Fig. 5 are seen seven of these prisms which came from Lima

beans ; here the lateral surfaces are narrowed, leaving tack-like heads of irregular shapes at both ends. Of course, the membrane thus made cannot have the strength of the membrane of the common white bean, as the prisms do not touch along their sides. The epithelia of the common bean are seen in Fig. 3, in the left lower quarter of field ; while the epithelia of the Lima bean are seen in Fig. 2, left group. It is well to note the remarkable interdigitations of these epithelia. When interlocked, unsoftened and unseparated by cooking, they must hold together the parts over which they are spread with great firmness. Indeed, if beans uncooked sojourn in the meatus of the ear, in the nostril, or in the alimentary canal, they remain unchanged more or less, for a time,

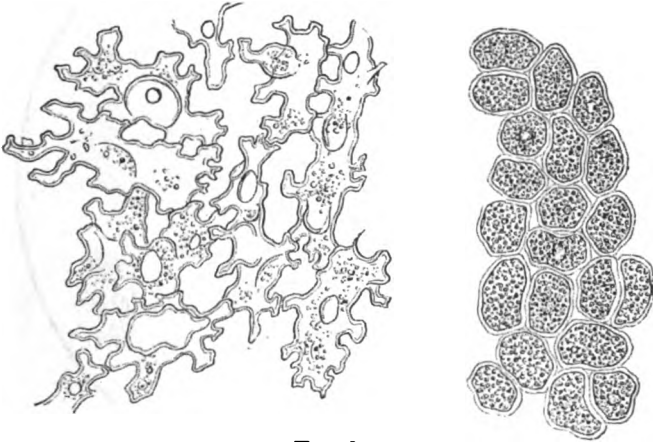


FIG. 2.

Pavement epithelia of Lima bean (boiled), with curious digitations.
Cells filled with coloring matter (may be legumen).

and are voided almost in the same condition as when they entered. No sane person would think of eating mature dry beans for food. The toughness, thickness and peculiar structure of the envelope of the bean make it such a strong obstacle to digestion and assimilation.

THE SUBSTANCE OF THE BEAN

is made up of starch grains, connective tissue, spiral vascular tissue, etc., etc.

The starch is not peculiar in its appearance and is readily recognized. In a section of an uncooked bean, the starch grains appear in globular masses of varying sizes, filling up, apparently, the meshes of the connective fibrous tissue, which is quite thick,

fibrous, homogeneous, polarizes light, and is probably cellulose or woolly fibre, very resistant to outside influences of any kind (see Fig. 4). In a section of raw Lima bean, the meshes appear as in one continuous net-work, making areolæ; but when cooked by baking or boiling, there is a great change wrought which is surprising, for the starch grains are found to be contained in sacs of thick cellulose which are distinct from each other and are of various sizes, shapes and contours, containing a variable number



FIG. 8.

Common small white bean baked, not thoroughly cooked; kept several days.

Bacteria abundant. Prism elements of skin. Digitate epithelia.

Two parenchymatous beans' sacs; one ruptured and discharging starch grains, the other whole.

of starch grains (see Figs. 3 and 5). They are globular, pyriform, elongated, compressed, apparently triangular, sometimes reminding of *diffugia cratera*, sometimes of *pelomyxæ*, and so on, but all covered with a transparent envelope or sac of cellulose which looks like the clear margin of *gemiasma verdans*, *rubra*, and *plumba*, found in malaria. The thickness of this coat is worth attention. Taking an average sac, I found it measured 8.5 mm., while the thickness of the clear investing sac measured 0.5 mm., so that the proportion for the case measured would be

8.5 to 0.5, one-seventeenth of the whole diameter for the investing sac. Or, to put it differently, if the sac were an egg two inches long and had a proportionately thick shell, it would be one-quarter of an inch thick, which certainly would be an extraordinary thickness for a hen's egg and make it tougher than an ostrich's egg, one of which exploded at the Peabody Museum, New Haven, the other day, from the pressure of internal gases and came near killing the scientific gentleman who was studying it. It is probable that it takes a great force to explode one of these sacs of baked beans (see figure 3). The fact that so few of the sacs are found ruptured after cooking and after migrating through the alimentary canal shows a great power of resistance to digestive



FIG. 4.

Raw Lima bean. Cross section, showing starch grains enclosed in meshes of connective fibrous tissue. (Compare with Fig. 5.)

agencies. In Fig. 3 the beans are not thoroughly cooked. This diagnosis was based on the following:

1. Action of polarized light.
2. Condition of the starch contained within the sacs.

First, Polarized Light.—On the uncooked starch grains, polarized light sets with great beauty, but when the starch is cooked, polarized light has no action; hence a good test of cooking is by polarized light. As the beans' starch grains are cooked they polarize light less and less, and when cooked (to repeat) polarize it not at all; so one can judge at once, as to whether beans are cooked or not, by polarized light. The purple selenite stage slip is the best. The writer discovered this about ten years ago and thinks he has the priority. However, this has been found so

good a practical test that he thinks it must be adopted in the future.

Second, Condition of the Bean Starch-Grains.—Before cooking they are clean cut, distinct; after thorough cooking they lose their outlines and forms, blend into one homogeneous mass, that is granular, devoid of structure, sometimes striated in coils, looking much like the solid extract of an herb as found in pharmacy, only not so deeply colored. The amount of disintegration, breaking down and homogeneousness constitutes, in my opinion, a very good test for the thorough cooking of baked beans.

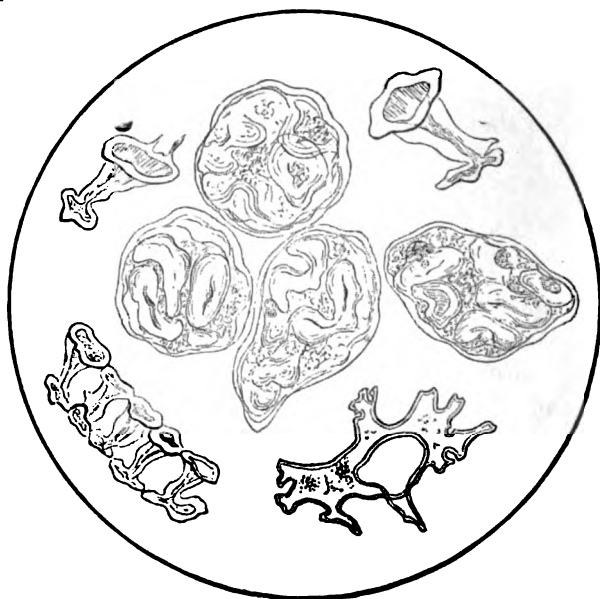


FIG. 5.

Boiled Lima bean. Four sacs unbroken, contents partially disorganized. One digitate epithelium. Group of five skin elements with tack-heads in contact, while the bodies are apart, thus making a much weaker membrane than that of the common white bean (see Fig. 1). Opposite are two skin form elements more highly magnified. Lima bean better than the other, because more easily cooked. (See Fig. 4 for raw Lima bean, to compare.)

BOILING THE BEANS

(see Fig. 5) serves to coagulate the protoplasm into a nucleus leaving a clear ground work about it; the grains are swelled and distributed more than in baking. These morphological changes are easy to study. A good one-quarter-inch objective, a two-inch

eye-piece, with a slide, cover, stand and tooth-pick, are means ample enough to verify these statements from off one's own table. With the tooth-pick small portions of the baked beans can be transferred to the slide, a little water and manipulation with the cover will distribute the specimen into an even field, and the slide is ready for the microscope. Those who have a polarizing apparatus can test the specimen with it. The writer hopes that more attention will be paid to the morphology of food in time to come; for certainly it furnishes a field of study always present, easy to get at, and of vital importance to the human race in more points than the æsthetic one. This leads to the

PHYSIOLOGIC VIEW.

Baked Beans in Relation to the Functions of Digestion and Assimilation.

(Provided they are in good order and thoroughly cooked, so as to furnish the simplest problem of solution by the functions named; provided the cellulose structures are softened, macerated and separated; provided the salivary liquids are thoroughly mixed in the mouth and the beans thoroughly ground up by the teeth.)

In the stomach the beans digest little; in the intestines the bile, the pancreatic and intestinal fluids act on the starch, complete the changes already begun by the cooking, the mastication and the gastric juice, and turn it into glucose, in which soluble condition it is taken up into the portal circulation and transmitted to the liver.

The other elements of the beans that are made soluble are also absorbed into the system, and it is fed and warmed by the beans. The longer this food stays in the stomach the more it ferments. For it must be remembered that the alimentary canal is a great reservoir of fermentative vegetations, as a rule, so that sedentary persons have more trouble with this article of food. Persons who live 'out of doors and who move about actively and work hard, digest vegetable foods better than the sedentary, as the food is accelerated in its passage through the alimentary canal and the undigested remainder has less time in which to ferment. Hence, when we hear of a Maine lumberman thriving on baked beans, which frozen solid by the barrel and cut out with axes, are then cooked, we lay the benefit to the fresh air of the woods and the violent exercise.

From what has been said it must be admitted that baked beans are not easy to digest, and that there is good reason for the unusual amount of intestinal gases that accompany their digestion. This gas is usually carbonic acid; it is formed inside the bean sacs, and they must explode like microscopic *dynamite bombs in the intestines!* If we consider that nerve force is the agent by which digestion is regulated, if not produced, other things being equal, it takes more nerve energy to digest baked beans than some other kinds of food, and, of course, there is less energy left to run the rest of the economy in the departments where nerve force predominates, and hence the cerebral centres cannot act with that efficiency and energy that they could if the system was fed on a food that took less nerve force to digest it. To be sure, *allowance must be made for differences in individuals in the power of digesting baked beans* and other articles of food. Some will digest their meals when others cannot, because their organs are in remarkably good condition to do their work; but aside from this, it is not profitable to abuse a good digestion; sometime there will be a break-down.

PATHOLOGICS.

Baked Beans as a Cause of Disease.

Some years ago, Dr. J. H. Salisbury (Albany Medical College, '50) made some unique but most valuable experiments as to baked beans. He put himself and six strong, healthy laboring men on an exclusive diet of baked beans, coffee and milk. They were sedentary, save that in the morning and evening they all marched out on the street in military order for exercise. Almost immediately there was diarrhœa, followed in all the cases (in about fourteen days) by *consumption* of the bowels. If any one doubts this, he is asked to live on the same diet exclusively for the same time and report results, which were so uniform in the above cases that there is no hesitation in predicting like issues. This may be called too severe treatment of any food, and that no food would stand such a test, because so unnatural. Dr. Salisbury found that lean beef also would stand all the test of a healthy food, hence its adoption as a basis for his treatment of disease. It is to be hoped that Dr. S. will publish the full accounts of his experiences for the benefit of the human race, but until then it may be remarked here that he found this diarrhœa was caused by the

alcoholic fermentation of the baked beans, producing alcohol, carbonic acid and vinegar. The alcohol showed itself by the fuddling of the men, while it did good by arresting for the time the active process of the fermentation. The results of the action of the alcohol were:

1. Distention of the bowels by gas.
2. Paralyzing them by direct contact.
3. Paralyzing the epithelia of the mucous membrane, making them, as it were, drunk, causing a thickened catarrhal condition, hence the profuse liquid discharges, and later on some sulphuretted hydrogen.

He speaks of the sacs described above as bursting with fermentation, thus paralleling that explosion of the ostrich's egg. He said if he continued the diet of beans with the men some of them would have had consumption of the lungs, and he regarded a diet of baked beans as one of the most favorable for the production of consumption. He has told me for years that this article of diet was no doubt one cause of the prevalence of consumption in New England. These views should command respect, as they are based on food experiments (with men) the range, extent and thoroughness of which have never yet been equaled. The writer's experience with baked beans, based on a long study of the morphology of fæces, goes to sustain the positions of Dr. Salisbury.

It is always possible to detect the eating of baked beans by a microscopical examination of the forms found in the fæces of the eater. The beautiful cellulose prisms or double tack-headed elements of the outer membrane of the bean or pea will tell the tale, while an abundance of the sacs filled with starch grains, sure to be found, will testify to the same thing. At one time the writer verified this in his own person, and was astonished at the quantity of undigested beans and other food that ran the gauntlet of an alimentary canal which was called healthy. Once the writer visited the Massachusetts State Prison at Concord (before it was used as a reformatory). Passing by the latrine, he saw a pile of baked beans large enough to load a horse-cart, most of which had passed through the digestive organs of the prisoners. Certainly if this exhibition meant anything, it showed that these baked beans are a poor prison ration. I think it would be more rational to feed the beans to animals whose organs are better

adapted to digest them than man's, and, if need be, let man eat the animals. If the sacs of the bean-grains could be ruptured before eating, considerable objection would be removed. They might be crushed between rollers, or pounded in a mortar, or mashed like potatoes. If bean-eaters would take time to thoroughly cook and chew them, the situation would be improved. But probably one great popular recommendation of baked beans is their smallness, so that they are swallowed whole, easily, and thus save time in eating. If man had the gizzard of fowls, or five stomachs like bovines, this might answer; but it seems to me we do ourselves harm in the end by imperfect mastication, which fails to crush the bean-sacs and mix the juices of the mouth with the starch of the bean, and so prepare it for the digestive processes it should undergo; for if they are not prepared, a good portion is wasted, as the Concord latrine witnessed.

CULINARY ETHICS.

Importance of Cooking.

The writer has no idea of influencing the abandonment of baked beans as food, but he would like to put in a plea for better cooking. It goes without saying that the average cooking is bad. It is no wonder, for this vital matter is often put in the hands of the humblest and most unintelligent members of the household, whose views of doing things are so fixed, conventional and authoritative that they may be in truth termed "queens" of the kitchen. In the days when mothers and grandmothers did the cooking, there was a better chance for good results. Still, as we now know the peculiar physical conditions to be overcome, perhaps the queens of the parlor may join the battle for good cooking, as it is a vital battle. Good cooking means health and life, and bad cooking means disease and death. I hope it will become fashionable for families to cultivate the microscope as they do the piano; then there will be a chance to spread knowledge which will protect the rights of households. I do not know why good cooking is not as inalienable a right as any named in the Declaration of Independence. Why should we go through life with our intestines waging an unequal warfare with any food, baked beans for example, simply because we are too ignorant or inactive to demand that they shall be cooked after a process like the following?

1st. Soak a quart of beans over night in two quarts of cold water.

2d. In the morning turn off the water, add fresh water and boil them till the membranes begin to separate; turn off the water.

3d. Put the beans in a baking pot, with half a pound of salt pork buried in the beans, add two tablespoonfuls of molasses, and cover the whole with water. Bake in a slow oven all day; a baker's oven is best. Watch the beans, and if they become too dry add more water. When thoroughly cooked it will be known by the softness of the beans in the mouth between the teeth, by the taste, and by the microscope showing the starch grains broken up and mixed in one homogeneous mass that will not polarize light with a selenite plate.

4th. Take time to eat and chew thoroughly.

5th. After eating, go out in the open air and walk or work. Do not go to church right after eating baked beans; they will stay in the stomach and their indigestion will do much towards spoiling the enjoyment of the exercises there. Dyspepsia and religion do not go together well, but good digestion and holiness are twins. Holiness, health, whole and hale, come from the same root. A holy man is a healthy, whole man, with all the functions in good order and no dyspepsia. Dyspepsia is a physiological sin.

1730 BROADWAY, *March 1, 1887.*

ABSTRACTA.

OPPONENTS OF THE GERM THEORY "are very quiet in England; even Dr. Bastian has not said any thing since the debate at the International Congress in London; in Germany??; in France, Jaccoud and Peter occasionally offer protests, but Cornil and Lancereaux have carried the profession with them, and the younger generation of workers, to a man, have stained fingers. The truth is that the current has been too strong, and the majority find it easier to float than to swim against it. In this country there is a remnant, and Dr. Morris Longstreth has recently published a long article from the old standpoint, entitled 'Against the Germ Theory.' (*Therapeutic Gazette*, Nov. 1886.) Dr. H. D. Schmidt, New Orleans, holds that the bacillus is a *bacterium* (which is, however, a minor matter), and that it develops in the nuclei of the cells; 'that it may be formed from

the protoplasm of animal cells, the vital activity of which is on the wane, or is undergoing involution. In other words, he returns to the theory of hetero-genesis, and thinks it possible that 'the normal arrangements of the molecules of the protoplasm of the nucleus of an animal cell may, under certain conditions of the organism, be altered in such a manner as to correspond with that of the molecules of vegetable protoplasm.' This seems rank heresy in these days of staining fluids and cultures." — *Canada Med. and Surg. Journal*.

TUBERCULOSIS CURED BY TURPENTINE by Dr. Schian. Translated from *Der Practische Arzt*, by William Grebe, M.D., Richmond, Va., for *The Southern Clinic*. Rudolph Herbst, æt. 34, with cough, emaciation, purulent and bloody expectoration with bacilli, frequent hæmoptysis, night sweats, no diarrhœa; cavity in upper lobe of the size of a goose egg.

Six drachms of turpentine were inhaled daily for three weeks, when nasal inspiration was substituted. In twenty-four hours the hæmoptysis diminished; in three days there was no blood in expectoration; after seven weeks no bacilli visible, and the patient could leave the bed for some hours; after ten weeks he walked a mile to physician's office, and auscultation and percussion revealed no sign of disease.

SMALL-POX AND COW-POX.—George Fleming, LL.D., in *Lancet*, November 20: That vaccine lymph is the virus of small-pox, modified by transmission through the cow, is not proved. Dr. Klein failed to produce cow-pox by inoculating twelve heifers with small-pox. The same result followed experiments in France and at Turin, where the Italian Commission labored for a long time.

VACCINATION DURING SMALL-POX INCUBATION, repeated on three successive days, by Gubert, a Russian student, was followed by mature vesicles in five days. Small-pox was arrested in twenty-seven cases, although in some the temperature was 101° before vaccination. Calf lymph was used.—*N. Y. Med. Times*.

GELATINE-TAFFETA IN OPHTHALMIC SURGERY.—Where an incision is made in the eyeball, the wound comes in contact with the conjunctiva palpebrarum and the conjunctival secretion. Galezowsky has succeeded in making thin gelatine plates, now manufactured by Wurtz in Paris, which contain corrosive sublimate and cocaine. One side of the tablet is coated with glue, which clings to the eye even after the gelatine and its contained ingredients are dissolved, and protects the incision until healed.—*Deutsch Med. Zeit., Med. and Surg. Rep.*

PERMANGANATE OF POTASSIUM IN AMENORRHEA has been uniformly inoperative.—*J. Fletcher Thorne, F.R.C.S., Edinburgh, in Therapeutic Gazette.*

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

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VOL. VIII.

MARCH, 1887.

NO. 3.

ALUMNI DAY AND FIFTY-FIFTH COMMENCEMENT, ALBANY MEDICAL COLLEGE.

The fifty-fifth commencement of the Albany Medical College occurred Wednesday, March 16, 1887.

The meeting of the Association of the Alumni, A. M. C., in the morning, was called to order at the sound of a femur, the gavel having disappeared. Prof. Franklin Townsend, Jr., delivered the address of welcome on behalf of the College, dwelling upon the necessity of thorough preliminary education preparatory to the study of medicine.

After various committee reports and miscellaneous business, Dr. Walter M. Fleming, of New York, president, delivered a fluent and fascinating address, which held the undivided attention of the audience for a period of forty-five minutes.

After impromptu speeches, Drs. Thomas Featherstonhaugh, S. A. Russell, J. V. R. Hoff, T. B. Van Alstyne, A. V. H. Smythe, as a nominating committee, presented this ticket, which was elected:

President, J. H. Helmer ('47), Lockport; vice-presidents, William C. Wey ('49), Elmira; Charles McCulloch ('77), Central Bridge; Earl D. Fuller ('78), Utica; Lemuel Cross ('56), Cobleskill; A. J. Peets ('77), New York; recording secretary, W. G. Tucker ('70), Albany; corresponding secretary, C. M. Culver ('81), Albany; treasurer, T. W. Nellis ('81), Albany; historian, E. A. Bartlett ('79), Albany; executive committee, A. Vander Veer ('62), Lorenzo Hale ('68), George S. Munson ('80), Albany; J. H. Mitchell ('81), Cohoes.

COMMENCEMENT EXERCISES.

The exercises at the Leland Opera House were opened with the overture "Morning, Noon and Night." The Rev. Dr. Henry M. King offered prayer, and graduate Andrew McFarlane read an essay. Dr. S. H. Freeman gave the curators' report. Hon.

Amasa J. Parker LL.D., announced that the chair of Psychological Medicine, made vacant by the death of Dr. John P. Gray, of Utica, had been filled by the appointment of Prof. Henry Hun. President Parker then conferred the degree of Doctor of Medicine upon the following graduates:

Eugene Morton Austin, Albany; James Harvey Bissell, Ballston; Charles M. Bradley, Albany; William Wallace Broga, Otis, Mass.; Henry Turner Brooks, Flushing; Peter Gerald Cotter, Plattsburg; Cornelius Wells de Baun, Fonda; M. Francis Drury, Broadalbin; Robert Edward Fivey, Gardner, Ill.; Elmer Lewis Fletcher, Decorah, Ill.; Marquis de La Fayette French, North Colesville; William Ingalls Gordon, Athens; John Alexander Heatley, Schenectady; Garret Lansing Hogan, Ballston; Richard J. Hogan, Granville; Arthur Wing Johnson, Greenfield Center; Eugene Merrill Jones, Berlin; Owen Frank McElveney, Albany; Willis Goes McDonald, Cobleskill; Andrew McFarlane, Albany; George Hamilton McMurray, Fort Edward; Webster Miller, Hollowville, Mass.; Charles Henry Moore, Albany; Henry Frederick Christian Muller, Albany; Herman Vedder Mynderse, Schenectady; Clarence Mann Paine, Albany; George Freeman Palmer, Pike; Robert Palmer, Jr., Gloversville; John Spencer Phillips, Gloversville; Henry John Potter, Jr., Bennington, Vt.; Henry Zecariah Pratt, Albany; James Edgar Sadlier, Walden; George E. Smith, Richmondville; Francis Willard St. John, East Galway; Charles Van Wert, Albany; Thomas Hickley Willard, Albany; Henry C. Young, Schenectady.

The Hon. Andrew S. Draper, superintendent of public instruction, delivered the address to the graduating class, and the valedictorian was John Alexander Heatley.

The report on prizes was read by Dr. Henry Hun, and awards were made as follows:

Peter Gerald Cotter, prize offered by Dr. T. W. Nellis; first surgical prize, offered by Dr. Vander Veer, Charles Van Wert; second surgical prize, offered by Dr. Morrow, James Harvey Bissell; third surgical prize, offered by Dr. Hailes, Frank H. Lear; eye and ear clinic prize, offered by Dr. Merrill, Charles Henry Moore.

The appointments announced by Dr. S. B. Ward were:

Albany City Hospital, W. G. McDonald, first place; James E. Sadlier, second place; St. Peter's Hospital, Peter G. Cotter, first place; M. Francis Drury, second place.

The fourteenth alumni dinner was given in the evening at the Delavan. President Fleming was toastmaster. Dr. Vander Veer, after repeated calls, responded in place of President elect Helmer, who was absent; and Rev. C. H. W. Stocking, A. S. Draper, S. N. D. North, A. L. Andrews, Capt. J. V. Hoff, U. S. Army, Drs. S. B. Ward, C. W. DeBaum and Z. S. Phillips gave entertaining responses to various toasts.

ALBANY MEDICAL ANNALS:

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APRIL, 1887.

No. 4.

CORRESPONDENCE FROM EGYPT:

NOTES ON MEDICINE IN THE ORIENT.

BY J. A. S. GRANT-BEY, M.D., CAIRO, EGYPT,
Senior Surgeon to Railway Administration.

[FOR ALBANY MEDICAL ANNALS.]

MEDICAL JOURNALISM.

The *Shiffa* ("Healing Art") is an Arabic medical journal edited by an enterprising Syrian medical man, Dr. S. Schmeil, for the purpose of keeping native medical men up to the times.

Dr. Schmeil is a private medical practitioner, whose native tongue is Arabic, but who speaks French fluently and knows English sufficiently to be able to read the English medical literature.

This journal, besides containing translations of extracts from European medical publications, also contains a fair proportion of original articles by local practitioners and by medical men practicing in Syria, both native and European. This journal was founded by its editor and proprietor on the 15th of February, 1886; he has been assisted by Dr. Herbert Milton, the director of the Qasr-el-Ainy Hospital, where there are, on an average, between 400 and 600 patients. There is so little enthusiasm among the professors and their students that they not only abstain from subscribing the twenty francs a year to get this journal, but numbers of them would let it lie on their tables

unopened, even when it is sent to them free of charge. In the meantime, one is a professor and another is a student, simply because some influential persons insist upon their having these berths, just as in the notable case of Bismarck and his anti-fat doctor.

Native professors, students and medical practitioners have, therefore, to be taken and dealt with as they are. Seeing that they have no resources in themselves, and don't desire to have any from without, it is exceedingly difficult to reach them.

In all government coteries there is a sacred circle that no outsider dare cross but at the risk of being trampled under foot. This journal has so far succeeded that it has received the support of a select few within the sacred circle, and the smile of satisfaction may in time be elicited from the others.

There cannot be the shadow of a doubt in any intelligent mind that if the native medical men are to be kept up to the mark they ought to have a medical journal in their own tongue, and if previous attempts on their own part have always failed, they ought to support the foreigner who undertakes to do this work for them. In order to secure this, a mixed committee of collaborators has been formed with Dr. Sohmeil as chief editor. The members are as follows: Dr. Salem Pasha Salem (Arab), physician extraordinary to H. H. the Khedive, and late president of the Sanitary Department; Dr. Hassen Pasha Mahmoud (Arab), late president of Sanitary Department and previously president of Quarantine Board; Dr. Ashmed Bey Hamdy (Arab, son of the celebrated Dr. Mohammed Aly Pasha), late sanitary inspector of Cairo; Dr. Mohammed Bey Eloui (Arab), oculist; Mr. Ibrahim Soussa (Syrian), dentist; Dr. Abbate Pasha (Italian), late consulting physician to H. H. the Khedive; J. A. S. Grant-Bey (Scotch), late member of the Sanitary Board; Dr. Herbert Milton (English), director of the Qsar-el-Ainy Hospital; Dr. Fouquet (French), practicing in Cairo.

It will be observed that most of the above are cast-off employés of the government under the British *régime*, but they are none the worse for that.

It may be interesting to mention here the attempts that have been made from time to time to establish an Arabic medical journal in the East.

A medical review called *Al Yasoub* ("The Queen of the Bees") was founded about eighteen years ago by Dr. Mohammed Aly

(who afterwards became Mohammed Aly Pasha), Professor of Surgery at the Cairo School of Medicine. It appeared monthly for several months, then its sun set and it has never risen again. Its founder was killed in the Egyptian expedition against Abyssinia.

Al Tabeeb ("The Doctor"), a medical review by Dr. G. E. Post, learned in the Arabic language and literature, professor of surgery and botany in the American Medical College, Beyrout, Syria. This review was issued about twelve years ago, and came out twice a month for some months, then it ceased to exist for a time. It reappeared after several months, to disappear again, and a third time came to light rehabilitated and partaking more of a medico-scientific journal. It continued as such for a whole year, when it again dropped out of sight; but, Phoenix-like, it returned to its old haunt, to go back to Arabia Felix, whence it has not returned for two years.

Al Montakhab ("Selections"). This was a medical journal gotten up by a committee of professors at the Medical School of Qasr-el-Ainy, at the instigation of one of the members, Riaz Pasha, who supplied the money, printing press and every thing that was necessary, except articles; and, as these were not forthcoming from the members of the committee after five or six months, the journal ceased to live, dying of simple inanition. This was a test case, and no doubt the minister was disgusted at the result. No further attempt has been made under the native *régime*, nor under the British domination, to make up this want in the medical education of the native.

Then came *Al Shiffa* ("The Healing Art"), an account of which is given above. It is a monthly journal of forty pages, and has had an existence now of one year. It still continues to appear, but has many difficulties to contend against, as it is not backed up by any minister. Were Riaz Pash in power now, we should expect a more extensive development of the Public Instruction Department, but, in these days of reform, schools are being suppressed, and the public instruction budget has been lowered to a minimum. *Al Shiffa* therefore gets little help from that quarter.

DEFICIENCY IN EDUCATION AND GYNÆCOLOGICAL DEFECTS.

From the seventh century to the twelfth the Arabs were the only people among whom medicine made any progress. They

had medical schools at Baghdad in Mesopotamia, and at Cordova, Toledo and Seville in Spain. But after the twelfth century they fell into disuse, so that since then, up to fifty years ago, the Arabs had neither schools of medicine nor hospitals.

At about the age of four years boys and girls are circumcised. In the case of the girl it is the labia majora, along with the clitoris, that are cut off, but very often this rite is neglected in the female.

There used to be a lying-in hospital at Qasr-el-Ainy, where poor women were admitted and had their confinement conducted free of charge. This hospital afforded ample opportunities for ingratiating the neophyte midwives into the practical mysteries of their art, while it was a great boon to many a poor native woman. Most unfortunately for this hospital and for native midwifery, it could not withstand the current of reforms, and was therefore swept away, and the void has not been filled. It is an easy thing to pull down as compared with building up. Why, then, should we complain about the midwives when they have been conscientiously acting up to their lights? We answer, Let the authorities see to it that their light is not darkness.

In the treatment of native women, one has to be patient and wait for opportunities of thoroughly examining them, so as not to bump up against their prudery. In hareem practice we must make haste slowly.

Thousands of criminal abortions are perpetrated by midwives. The shameless way in which native women ask respectable medical men to perform this "small operation" for them is only a sign of how commonly it is practiced among them.

A STEP IN THE RIGHT DIRECTION.

Dr. Salem Bey is now Dr. Salem Pasha. He studied medicine at Munich, and is one of the best instructed and most enlightened of the native practitioners. He was the private physician of H. H. the Khedive while he was yet a prince, and now he is His Highness' "*médecin en particulier*." On his return to Egypt from Munich, where he took his medical degree with honors, he was appointed Professor of Pathology at the School of Medicine. Being imbued with the spirit of German medicine, he commenced almost immediately to translate Niemeyer into Arabic, in order to introduce it as a text-book for his class, instead of the antiquated translations from still more antiquated

French authors. By the time, however, that this translation was put into the hands of the students, even Niemeyer was beginning to get out of date.

Be this as it may, Dr. Salem Bey took a step in the right direction, and it was through no fault of his that Niemeyer was beginning to be ancient before his translation appeared.

Very speedily Dr. Salem Bey rose to be director of the School of Medicine, and after the death of Dr. Galliardot Bey he was appointed president of the Board of Health and of Public Hygiene. He had then to resign his professorship in the school of medicine, but that did not make him lose interest in the students.

The trying time of the cholera came on apace before Dr. Salem Pasha had had time to be well settled in his presidential chair, but he was ably supported by a few faithful and hard-working members of the board.

THE UNFORTUNATE COLLISION

between Surgeon-General Hunter and the Board caused the latter to founder and sink. Dr. Salem Pasha was held by the British representative to be personally responsible for the published opinions of the Board, because his was the only signature attached to its decisions. Dr. Salem manfully defended himself and the Board, and refused to be coerced. This sealed his fate, as well as that of the Board, and at its funeral pyre Surgeon-General Hunter was be(k)nighted in the smoke.

At this time such was the furor raised against all those who had dared to oppose Hunter that political influence militated against them in quarters (and by individuals) where better things might have been expected.

An attempt was now made to have the Khedive dismiss Dr. Salem Pasha from being his "*medecin en particulier*," but, however willing His Highness was to favor the English, his saviors, he could not get over the superstitious presentiments of the Walidah Basha, his mother, who besought His Highness, even with tears, not to dismiss the physician that had attended him from his boyhood, else some dire calamity would befall His Highness.

GOOD FOR EVIL.

Those who were keen on this scent were therefore checked of their game, so that Dr. Salem Pasha is still "*medecin en particulier*" to H. H. the Khedive; and, finding that out of office

he has much leisure, his spare time for the past two years has been spent in translating the latest standard German book on pathology, by Kunzé, which is meant to replace Niemeyer as a text-book. It is now being published.

This is a good example of carrying out to the letter what Christians are inculcated to do, viz., when one strikes you on the right cheek you are to turn to him the other also. It is even more than this, for it is returning good for evil, Dr. Salem Pasha having now no official connection either with the Sanitary Board (*sic*) or with the School of Medicine.

But is to be feared that the rancour of Cain is working in the bowels of the natives like a silent volcano in the bowels of the earth that is simply waiting its time for an eruption.

NO SAFEGUARD AGAINST THE SPREAD OF EPIDEMICS.

Since the undeserved and unjust fall of Dr. Salem Pasha in February, 1884, the Sanitary Board has been little other than a fiasco. The first successor of Salem had to be dismissed, a second had to retire, a third resigned for reasons that it would be libellous to mention; then for a considerable time the Board was headless; at last, however a surgeon-major in the army of occupation was found adventurous enough to accept the post; but his reign, which still continues, has been even more disastrous than that of his predecessors. The members of the board keep accusing or else excusing each other, and no appreciable amount of work is done, while plenty of money is wasted on "trifles light as air;" and if an epidemic were to break out in Egypt now, look out so as to be on self-defence, for "Egypt is a bruised reed, on which if a man lean it will go into his hand and pierce it."

EGYPTIAN MIDWIFERY.

To the Editor of the Shiffo :

Dear Sir—Although the Arabic language is, in a literary sense, an unknown tongue to me, yet I highly appreciate the aim you have in view in editing this journal, which, if it does not die prematurely of inanition, like some of its predecessors, is calculated to raise oriental medicine to the status it had attained in ages long gone by. Since the closure of the medical schools of what may be styled the Arab age of learning, I fear Arab medicine has fallen into the background, and magic and humbug or superstition have taken its place.

From the time of Mohammed Ali, however, an honest attempt has been made, although by fits and starts, to elevate medicine out of the ignorance into which it had sunk. Hospitals and a medical school have sprung up as from the dead, and no doubt Egyptian medicine has thereby been rescued,

in some measure, from ignorant and destructive charlatanism. No one who is at all conversant with the actual state of medicine in Egypt can deny that it is still in leading strings, and will continue to be so until political freedom is secured, and science and medicine allowed to stand on their own footing and to walk alone.

It is only in this way that we may ever expect to have teachers remarkable for their aptitude, and students full of enthusiasm. But in these days of advancement we have returned to the *corvée* in science, so that teachers and students alike may be said to be driven to their work. The result of this is that the medical studies are finished without a particle of ambition to excel in the advancement of the profession, and the newly fledged doctors are sent to some out-of-the-way district; and I may say all the districts are out of the way to him who understands nothing but Arabic and whose school takes no further interest in keeping him *au fait* with every advance in medical knowledge.

I consider, therefore, that the *Shiffa* bridges over a very serious gap in the medical education of this country, and I most heartily wish it every success, and I hope that ere long the authorities may recognize its usefulness sufficiently to keep its head above water.

The main object of the present communication is to bring under the notice of those whom it may concern the need there is for improving the practice of midwifery amongst the native midwives.

EXODUS 1: 15-21.

So far back in Egyptian history as 3,800 years ago there were midwives whose names have been handed down to posterity as famous for saving children alive, when their destruction was even ordered for political purposes. The secret mainspring of their actions lay in this, that they feared God more than they feared man, at the risk of losing their positions, if not their lives, and God made even their enemies to praise them; for the powers that be are ordered of Him, and there is no wisdom nor understanding nor counsel against the Lord.

Now, if the Godfearing midwives of olden times saved many people alive, and thus were instrumental in building up a kingdom, what can we say about the native midwives of the present day, when they glory in executing their

"TEN CRANIOTOMIES DAILY,"

making certain the destruction of the child, and in nine cases out of ten sacrificing the mother? Surely this means the destruction of a kingdom. Why is it that Egypt, favored as she is by such a mild climate and peopled by such a prolific race, does not send forth colonies to people the earth? The principal reason, no doubt, is the lamentable fact that the race is decimated by a system of wholesale murder of infants and mothers.

To prove that this language is not at all too strong I shall here relate a case or two that have come under my own personal notice, and no doubt other physicians can quote numerous cases that have occurred in their practical experience of a similar nature.

Only a few days ago a Turkish gentleman came to my surgery, begging me to come to the aid of his wife whose accouchement was being conducted

by a native midwife. The pains of labor, he said, had been strong and frequent for the past twenty four hours, but the child was not yet born. The midwife had told the family that the child was dead and would have to be brought away in pieces, and that probably the mother would die. Such an alarming statement could not but call up the tenderest feelings of the family and make them cast aside for the time being their prejudices against male doctors. I was, therefore, called in, and the following is a short history of the case:

It was the lady's first accouchement. She was young, inclining to obesity and very strong. I found her seated on the usual oriental midwife's chair, the midwife sitting on the floor in front of her and plying her art. I purposely use this last word; for, although midwifery is entitled to be called a science, it is certainly not known as such by the native midwives. I noticed that the pains were excessively severe, and, on examining the patient, with great difficulty made out a head presenting, and that it was still engaged at the brim of the pelvis. The vulva was very cedematous and swollen as only the vulvæ of native women can swell. The next few efforts of the patient were rendered less painful to her by

THE ADMINISTRATION OF CHLOROFORM.

This soother of human suffering and facilitator of the accouchement is still foreign to the native midwives, so that they never use it in conducting their confinements, probably because they are not taught how to administer it in such cases, and there is not much chance of the rising midwives attaining this knowledge, as I understand that the Maternity Hospital has been suppressed and nothing substituted for it. Finding that no advance was made towards the delivery of the child, and that the midwife averred that the child was dead and that craniotomy should be performed, I proposed to try the forceps, and, failing with them, I told her we could still fall back upon other methods. The patient was now removed from the chair, placed on a bed and put thoroughly under the influence of chloroform. But while we were waiting for the forceps we had sent for, the midwife said there was nothing for it but craniotomy, and she could not understand why I set my face against it, as she said she sometimes performed this operation ten times in a day. I now had an opportunity of examining the abdomen of the patient, and found that the child was alive, which piece of information I communicated to the midwife, who probably did not believe me. I endeavored to pass a catheter into the bladder and so did the midwife, but we both failed, no doubt owing to the pressure of the head on the bladder, as it was now fixed in the brim of the pelvis. I made sure, however, that the patient had emptied the bladder only a short time before my arrival.

THE FORCEPS WERE NOW APPLIED,

and with a little compression and extractive force the child was brought into the world apparently lifeless. A few seconds' suspension by the feet and a little slapping with the hands very speedily restored the suspended animation. While I was occupied with the child, I noticed that the midwife inserted her hand right into the uterus and brought away the placenta, and this was done in such a nonchalant sort of way that I am con-

vinced this is her custom. I have heard of such a practice being recommended by a California doctor at one of the annual meetings of the British Medical Association; but in the obstetric section of that association he did not find a single supporter, and I am no advocate of doing any thing more than assisting nature when she is exhausted or when obstacles have to be removed out of the way.

The child was a female, which is looked upon as a calamity in a Moslem family, but they seemingly forget that if there were no females there would soon be a dearth of boys. Reflection, however, is not a prominent quality of the native mind.

The perineum of the mother was now examined and found intact.

I have been called to see the patient several times since the confinement, and I am happy to say that both she and the child are doing very well.

There is not the slightest doubt in my mind that if the midwife had been left to her own resources she would have performed

CRANIOTOMY IN PREFERENCE

to either forceps or turning, and would thereby have murdered the child that is alive and well to day; and, as she told the family that the mother would in all probability die, no doubt she was speaking from her own dire experience. She rather prided herself in showing me the instrument she employed to perform this murderous operation.

Now, there would be little use in reporting this case unless some remedy can be proposed for mitigating or putting an end to such malpractice.

I would recommend that all midwives who are discovered to be practicing their profession in such an ignorant way as to be a public danger should be reported to the head of the Sanitary Department, as well as to the minister of public instruction, with the view of having them not only called to task for their misconduct, but also instructed afresh in any particular branch in which they have manifested their ignorance or culpable carelessness. This need not interfere with their daily duties, as they could easily spare two or three hours a week to attend a class at the school of midwifery specially gotten up for them, and which they should attend until the professor is satisfied with their proficiency. They might also be instructed to send for skilled aid without delay when they find themselves in a difficulty.

In the case above alluded to, it was the family that insisted on having skilled assistance. Had the midwife had her way, she would have gone on with her craniotomy and finished the case—and, in all probability, the patient too.

As long ago as July, 1878, I reported

A FLAGRANT CASE

of malpractice to the authorities of the medical school at Qasr-el-Ainy, and as the midwife to whom the report refers is dead, it can do her no harm to lay the case before your readers, as it is a typical one and strengthens very materially the desirableness of carrying out some such suggestion as I have mentioned above. At that time there was no such medium of communication with the authorities as an Arabic medical journal, so the report had to be a private one, and names and details were given without hesitation.

Here, then, is a copy of the report alluded to:

CAIRO, 6 July, 1878.

Dr. Salem Bey, School of Medicine:

Dear Sir—With reference to the case I mentioned to you this morning, I am now able to give you further particulars, and I hope you will see the necessity of preventing such occurrences as far as it lies in your power to do so. The facts are as follows:

Last night I was called to assist an Arab woman named "Ley la ahd el al el mulla" in the Esbekieh Quarter, who had been in the pains of labor three days, and was attended by a doctress of the name of "Amne." I was told that this doctress had broken the child's head and pulled off one of its arms, and that the instrument she used was an iron hook that she wrenched from one of the windows, and that the woman was still undelivered, and the doctress had left her saying she would return "on the morrow." I found, as I had been told, the forearm of a child with a cord tied round the wrist and some pieces of the parietal bones all together in a "tish" (basin), the woman lying on the floor exhausted, undelivered, and the vulva oedematous and discolored, as if gangrene was about to set in. On looking into the vagina, I found the mucous membrane all torn, and the same gangrenous appearance presented itself. On passing the catheter into the bladder, a dark bloody serum passed, as if bladder and vagina communicated with each other. The mangled head could be felt in the vagina, and several sharp fragments of bone were piercing the vaginal walls. I carefully removed all these fragments, and after putting the patient under chloroform, I applied the short forceps and brought the mangled head into view, and in a few minutes the rest of the child was delivered. There was no narrowing of the pelvic diameters, the difficulty simply being an arm presentation, requiring the turning of the child for its safe delivery. Instead of that being done,

A BRUTAL SYSTEM

was adopted, causing the death of the child and probably also that of the mother. Finding that no progress was made, the doctress first broke open the head of the child with a barbarous instrument, which also lacerated the mother, and then she attempted to force the delivery by attaching a cord to the presenting arm and literally pulled it off. In England this doctress would be tried for murder.

I am, yours respectfully,

J. A. S. GRANT.

I may now mention that this woman's life was saved, but she had a large vesico-vaginal, as well as a recto-vaginal, fistula, for the treatment of which I sent her to the Qasr-el-Ainy Hospital, and gave her a letter giving a history of her case. I never heard any thing more about her, but I should think her case would be recorded in the hospital books.

Whether any thing was done to "Amne" I don't know, but I consider that I fulfilled a duty in reporting the case to those who had the control of such matters.

Now, sir, as a journalist should be an educationist, I trust you will make use of the communication for the benefit of the future of Egyptian midwifery.

With best wishes for the advancement of Egyptian Medical Science in general and for its midwifery in particular, I am,

Yours faithfully,

J. A. S. GRANT,

Senior Surgeon to Railway Administration.

TWO CASES OF ERYSIPELAS.¹

BY J. H. MITCHELL, M.D., COHOES, N. Y.

(ALBANY MEDICAL COLLEGE, 1881.)

CASE I—*Idiopathic Erysipelas Followed by Gangrene.*—March 6, 1885, I was called to see Mr. J. S., æt. 48, a wool-picker. Previous history good, but was in the habit of using stimulants. Had been complaining for two or three days of a burning and prickling sensation on the right cheek, which he attributed to a burr, from the wool he had been picking, having penetrated the skin. Upon examination I could find no wound, abrasion or foreign body. The cheek was swollen and also the submaxillary glands. The skin was inflamed, of a bright red color, with yellowish tinge. Patient had chills, headache, pain in limbs, intense nausea, vomiting and entire loss of appetite. Pulse 100, temperature 103°.

I at once diagnosed erysipelas. Prescribed quinine, aconite and belladonna. Ordered milk and lime-water, with beef essence, stimulants, saline cathartics, etc.; also ordered an external application of carbolic acid, fifteen drops to an ounce of vaseline. For the next four days the swelling and œdema were enormous, both eyes and the nose were closed, and the lips so stiff and swollen as to make it difficult to feed him. The redness became darker, especially over the region of the right submaxillary gland. Temperature ranged from 103° to 105°; pulse 100 to 140. The patient was delirious, sleepless and restless. On the morning of the fifth day found temperature 99½°, pulse 120, weak and flabby. Delirium ceased, and a dreamy or semi-comatose condition supervened, it being almost impossible to arouse him sufficiently to give nourishment. The redness had become still darker, being now almost a brown. I then ordered five drops of tincture of iron every four hours, with stimulants and the usual nourishment; also began using a one per cent. solution of carbolic acid in place of the ointment. In forty-eight hours the brownish surface had become circumscribed, of an oval shape, about five inches in length and three and a half in width; the œdema and swelling had begun to subside. The patient continued in the comatose condition for about four days.

¹ Read before the Medical Society of the County of Albany, Wednesday evening, December 22, 1886.

At the end of that period the œdema and swelling had almost entirely disappeared, leaving the brownish spot still darker and looking like an immense scab, which soon commenced to separate from the surrounding tissue as evenly and completely as though done with a knife. This gangrenous spot was situated over the submaxillary gland, being from two and a half to three inches in width.

On the 19th of March Dr. D. W. Houston saw the patient with me in consultation, at which time the prognosis was very uncertain. Pulse 120, temperature sub-normal; tongue slightly coated, bowels normal, appetite poor, general condition bad. The gangrenous spot was completely separated at the edges, but firmly adherent to underlying tissue, making it impossible to discover to what depth the gangrene had extended. The furrow between the gangrenous spot and the surrounding healthy tissue was at least half an inch deep. The gangrenous spot gradually contracted and became hard and dry. I commenced carefully removing piece by piece, without irritating the healthy granulations, using a spray of ten minims of nitric acid to the ounce of water with an atomizer. Upon the removal of the last piece there was left a cavity of about half an inch in depth, an inch in width and five inches in length, covered with healthy granulation, which slowly filled in until finally the process of healing was completed, leaving an almost imperceptible scar. The photograph which is shown presents the condition which existed at the end of four weeks. The affected surface was not completely healed until at the end of two months.

CASE II.—*Traumatic Erysipelas*. A. G., male, æt. 40. Previous history good. Had been in the habit of taking stimulants. Had an epithelial growth removed from right side of nose by a process said to be known only to an itinerant practitioner who was then stopping in Troy.

I first saw the patient about forty-eight hours after the growth had been removed with a plaster. There was a surface about the size of a two-cent piece covered with unhealthy granulations. The whole of the right cheek and part of the left were swollen, presenting the reddish and shining appearance characteristic of erysipelas. Patient had chills, headache, nausea, etc. Pulse 100, temperature 102°. I prescribed the same medicine as in the foregoing case, with the exception of the external application, for which I used twenty minims of carbolic acid to the

ounce. The inflammatory condition continued four days and then gradually passed away, the patient being entirely convalescent at the end of two weeks. In this case there was no delirium, although the temperature rose to 104° , nor was there any drowsiness after the subsiding of the fever.

These two cases of erysipelas occurred in my practice simultaneously—one, idiopathic, running a severe course, terminating in gangrene; the other, traumatic, and apparently more favorable to extensive development of micrococci, but with a simple course, the patient convalescing in a short period.

DISCUSSION.

Dr. D. W. Houston, of Cohoes: In connection with Dr. Mitchell's report of cases of erysipelas, I wish to mention experiments conducted by Dr. Hajek, of Vienna, on the relation of erysipelas to phlegmon or inflammation.

He started out to decide whether the streptococcus of erysipelas differed from the streptococcus pyogenes. So far as culture of these micro-organisms went, there was microscopically no difference, but yet Dr. Hajek does not think them identical. He inoculated two series of rabbits, one series with streptococcus erysipelas, the other with streptococcus pyogenes. The greater numbers of the first series produced typical erysipelas, ending in restitution. The greater number of the streptococcus pyogenes series produced intense swelling, accompanied by suppuration. This, the doctor thinks, is proof that the cocci are not of the same nature. Finally, the histological changes produced in the living tissue by the streptococcus erysipelas differ widely from the changes produced by the streptococcus pyogenes.

NAPHTHALIN is a remedy which does not seem to have the general use which its merits deserve. In certain forms of diarrhœa it seems particularly serviceable. In the case of a young man at the University Hospital who had had for many months a troublesome diarrhœa, except when upon a most restricted diet, naphthalin, gr. v, in capsule, five or six times a day, relieved the condition in a couple of weeks. It seems specially adapted to cases with flatulent dyspepsia and intestinal indigestion. In two cases of large bowel trouble it did no good. In the diarrhœa of phthisis it is useful, and Dr. Peabody, of New York, tells me that he has found it very advantageous in typhoid fever. A case of painful dyspepsia which had resisted the usual remedies, yielded in a short time to the capsules. It may be administered also in from 5 to 15-grain doses with charcoal and glycerine.—*Canada Med. and Surg. Journal.*

SPONTANEOUS CURE OF HYDROCELE OF THE CORD.¹

BY LEMUEL CROSS, M.D., COBLESKILL, N. Y.

(ALBANY MEDICAL COLLEGE, 1884.)

To-day Mr. D. called to consult me, with fear and trembling in his manner, in reference to an old hydrocele which had suddenly taken wings and wafted away. He was hardly able to divine the message which had been sent him in this mysterious manner, and felt he must have more light, in order to convince himself as to its being a friendly greeting or a warning to call him away. Certain he was that he missed something in the morning when he arose and dressed himself and found his pants loose and baggy, and expressed himself as feeling as highly gratified as the boy did when he missed the hornets' nest from the same vicinity.

He had been the possessor of this hydrocele for several years, and it had been his constant companion, save on two or three occasions, when it had been tapped and its contents withdrawn. The last tapping it received was on the 5th of November, 1885, when he was operated on for radical cure, by the injection of pure carbolic acid. The operation was a failure, because it was improperly or imperfectly performed, for want of proper assistance.

On the evening of the 12th of February, 1887, he retired in the usual good health, slept soundly, and in the morning when he arose and attempted to adjust himself into his pants, discovered for the first that his old and familiar friend had been stolen from him. He examined his bed and examined his drawers, to find that not one drop had been spilled by the angel visitor.

I found an empty scrotum and an enlarged and indurated left testicle. The rapid absorption was the novel feature to me, as well as surprise, because it could not be traced to any traumatism or exciting cause, not even to the spiritual stimulus of a faith cure. The hydrocele angel walked in and out on the trophic centers and carried its contents with him.

I send the society this trivial greeting, believing that not many of her members will ever form the personal acquaintance of this magic physician and witness many such heroic cures on this side of the great hereafter.

¹ Read before the Medical Society of the County of Albany, Wednesday evening, March 22, 1887.

ABSTRACTA.

BICHLORIDE OF MERCURY AND PAPAYOTIN IN DIPHTHERIA.—By J. A. S. Grant-Bey, M.D., LL.D., Senior Surgeon to the Egyptian Government Railway Administration, etc., etc. (*Medical Record*, March 5, 1887). In my opinion papayotin merely digests the membrane (just in the same way as the gastric juice digests the fibrinous material in our food), and may or may not have any parasitocidal action whatever. I have not the slightest doubt, however, that it forms an excellent adjuvant to the bichloride treatment of this formidable malady, that is still one of the *bêtes-noires* of the profession.

Syringing the nose with the antiseptic solution of the bichloride should not be neglected, as in this way the upper part of the pharynx comes under the direct influence of the remedy; while, if the false membrane has already been formed there, the papayotin may be applied to dissolve it away.

When the patient is not able to swallow, or refuses to take nourishment, and is very prostrate, I give enemata every four hours, consisting of about four ounces of strong beef-tea, with twenty drops of brandy. When milk can be taken, I prefer it to all other kinds of nourishment, and I generally add to it about one-third *aquæ calis*.

The following are the usual precautions I adopt in all diphtheritic cases:

1. Isolation of those who are not required to attend.
2. Thorough and constant disinfection of the whole house, but sick-chamber and water-closets in particular.
- For this purpose I use towels saturated with crude carbolic oil, and hang upon towel-racks or any other suitable thing.
3. Attendants are made to gargle their throats now and again with some disinfectant, or even with salt water.
4. Chamber utensils are also disinfected.

I have also thought (although I have not as yet carried it into practice) that it would be a good precautionary measure to put both attendants and those who have been isolated on a mild bichloride *régime* as long as there was any danger of the appearance of the malady that might still be in its incubative stage.

I claim for the bichloride treatment this great advantage, that besides giving better results than other remedies, the patient's strength is not wasted by those almost convulsive fits that are so frequently induced by the struggles of the patient to prevent the throat from being examined.—*The Epitome*.

BENZOATE OF SODA FOR ERYSIPELAS.—Haberkorn, believing that the various antiseptics have not an equivalent action, that salicylic acid is especially appropriate for infective diseases of the joints, and calomel and corrosive sublimate for intestinal

affections, has brought forward benzoate of soda as particularly efficacious for erysipelas, scarlatina, and other infectious diseases with cutaneous localizations. In fifty cases of erysipelas the author has obtained excellent results with the following medication:

He administers from three to five drams of benzoate of soda daily, in a mucilage of seltzer water, and makes no local application. The medicine was kindly borne. The temperature invariably descended to the normal within forty-eight hours; the local manifestations disappeared rapidly, and desquamation was more rapid than usual. In all the cases treated not one was fatal. In two cases in which the progress was slower, the author laid the blame to the dose being insufficient.—*Rivista Internazionale*.

TREATMENT OF ERYSIPELAS.—For the treatment of erysipelas Dr. Archangelski has tried a number of applications, and finds that their comparative efficiency is represented by arranging them in the following order: (1) benzoic acid; (2) tincture of iodine and turpentine, as ointment; (3) sulphate of copper; (4) sulphate of iron; (5) oxide of zinc; (6) naphthalin; (7) solution of perchloride of mercury, 1 to 300; (8) chloride of zinc; (9) iodoform.—*Med. Record*.

ERYSIPELAS.—Prof. Da Costa continues to strongly advocate and recommend the use of pilocarpine in robust, plethoric subjects. It is of striking value, and better results can be obtained than from any other mode of treatment. The proper dose is one-sixth to one-eighth of a grain of pilocarpine, or 20 minims of fluid extract of pilocarpus. Local means are not of much avail.—*Coll. and Clin. Rec.*

ERYSIPELAS.—Dr. Buckworth (*Practitioner*) states that a favorite prescription in St. Bartholomew's Hospital for erysipelas is equal parts of precipitated chalk with melted benzoated or purified lard, with the addition of half a drachm of carbolic acid to every ounce of the ointment.—*Peoria Med. Monthly*.

PERMANGANATE OF POTASH IN ECZEMA.—Dr. W. G. Moore (*Weekly Medical Review*): An immersion bath, 15 grains to the pail of water, as in the *Archiv. für Kinderheilk*, the patient to remain in the water until the fluid turns brown; or, R Potassa permang. 10 grains; aqua dest. 1 ounce. M. To be applied to a circumscribed patch freely.—*Peoria Med. Monthly*.

RESORCIN IN ECZEMA.—Dr. H. P. Chase claims to have treated nine cases of eczema with resorcin with only one failure, and this one had failed to carry out instructions. One case had passed the hands of specialists without relief. The drug was used as follows: R Resorcin, 2 drachms; glycerine q. s. ad 2 ounces. M. Apply with a camel's-hair pencil morning and evening.—*Peoria Med. Monthly*.

THE METRIC SYSTEM.—Extracts from the Annual Address before the International Institute for Preserving and Perfecting the Anglo-Saxon Weights and Measures, by Charles Latimer, C. E., President, at Cleveland, Ohio, November 10, 1886.

Thus far we have kept the advanced thinkers waiting, knocking always secretly at the door of Congress, trying surreptitiously to get in some compulsory bill. Their last attempt was at the last Congress to get a bill passed to make the use of the French system compulsory in government schools and in the transactions after 1889. As usual it was a hard bill to find. I wrote to several Congressmen and all answered that there was no such bill. I went to Congress and tried to get it, and I was told that there was no bill touching that subject before the House, and yet there was, but the French metric committee is always secret on these French questions. How many of our people know that there was a bill passed last Congress appropriating \$2,270 for the International Bureau of Weights and Measures, whose avowed object is "perpetuating forever without change the basic units of the metric system of weights and measures"? That money went to France, and an annual appropriation has been made for that purpose ever since the treaty of 1875.

In *The Congressional Record* for June 5, 1886, in the discussion on "the diplomatic and consular appropriation bill" we find:

"The reading of the bill was resumed and continued to the end of the following clause from lines 153 to 161: 'Contribution to the maintenance of the International Bureau of Weights and Measures for the year ending June 30, 1887, in conformity with the terms of the convention of May 24, 1875, the same, or so much thereof as may be necessary to be paid, under the direction of the Secretary of State, to said bureau on its certificate of apportionment, \$2,270.'

"*Mr. Conger*: 'The result of it is to pay out the money of the people of the United States, so far as I understand it, to make the United States a party to the bureau or convention or congress represented from the different nations in which the French metric system has a preponderance of representatives, and to aid that insidious, persistent and attacking force in the United States, which enters almost every bill where there is an opportunity and provides for unknown weights and unknown measures by name as the measures and weights of the people of the United States. It has crept in, in one form and another, until running through our bills and our laws now (inadvertently and without much thought on the part of legislators, I apprehend, but not without having caused some considerable alarm to people who desire the old weights, the old measures, the old inch, the foot and rod, and the rood, and all the forms which our ancestors have been accustomed to and which have become a part of the common language of the country) are provisions for

changing over to grammes and meters and kilometers, and all that innumerable system of outlandish and Frenchified and heathenish names which a certain body of people in the United States have been attempting from the time when John Quincy Adams made his celebrated report upon the propriety of preserving to an English-speaking people, as far as might be in our laws, the weights and measures and the names of those weights and measures with which our people had been familiar in the old world for a thousand years, and in this country since the establishment of society here."

(Mr. Conger then read from the report of the convention held at Paris, May 20, 1875, the names of the representatives. Mr. E. B. Washburne represented the United States; the remaining twenty one members of the bureau were foreigners. England was not represented.)

"I find Article 7 provides this, as to what this bureau shall do:

" "It shall be its duty to discuss and initiate measures necessary for the dissemination and improvement of the metrical system, and to pass upon such new fundamental metrological determinations as may have been made during the time when it was not in session. It shall receive the report of the international committee concerning the work that has been accomplished, and shall replace one-half of the international committee by secret ballot. The voting in the general conference shall be by states; each state shall be entitled to one vote."

"I find another little matter here about the establishment of this commission, and its objects, etc.

" "37. The international commission desires to notify to the several governments interested the great utility of founding an international bureau of weights and measures, upon the following bases. * * * 4. The establishment shall be subordinate to the international metric commission, and placed under the supervision of the permanent committee, who shall appoint the director."

"I am trying to go through this, but all over this document I have before me there are phrases and paragraphs showing the object, but I read this resolution:

" "*Resolved*, That that this society has received with gratification the intelligence of the ratification of a convention between the leading powers of the civilized world, establishing an international bureau of weights and measures, for the purpose of perpetuating forever without change the basic units of the metric system of weights and measures, and the distribution of authenticated copies of the prototype standards of that system, as well as for the exact comparison of standards of all descriptions and the determination of their relations to those of the metric system."

"This is brimful, bursting out all over with the efforts that are being made by the bureau and by friends of the metrical

system to disseminate it, and, by secret votes and otherwise, give it control, and to vote each by states, each republic or government having one vote, and in all these ways to which I have alluded to disseminate and extend the international metric system. So, sir, what I feared from the reading of the bill is verified, and more than verified by the treaty and the history of the institution. I ask for a vote. I move to strike out that paragraph.'

"After some discussion, a vote by yeas and nays was taken, with this result: Yea, 1, Conger; nays, 42. So the motion to strike out was not agreed to."

Mr. Evarts made the treaty, and yet did not know the meaning nor extent of it. What was it but to tie us to the tail of a Franco-Latin kite? The pride of France is at stake; she is endeavoring to force the meter upon the nations, and she will honor the United States to humbug the people into accepting the meter. It is the mark of subjugation, not of liberty—the mark of the Napoleonic dynasty. As I have remarked before, every nation conquered by Napoleon has accepted the French meter, but the Anglo-Saxon world stands out against it.

Remember that the treaty with the Latin nations for the perpetuation of the meter, entered into through Mr. Washburne, expires soon—in 1889. Call on your senators and congressmen; inform them of the date; do not let the treaty be renewed under any circumstances; keep your representatives posted; if they remain ignorant of the situation, as were some against whom Mr. Conger took up the cudgel, vote against them at the polls, and send men to Congress who will keep posted. It is a shame that congressmen should know so little of a subject so vital to our nationality—the deepest question before the people to-day.

We have the evidence that the Great Pyramid does most clearly show a plan of wonderful nature, the key of which has been discovered by our society, and the design of the architect will be disclosed. The inch used by the Anglo-Saxon people is found therein as one of the special measures thereof, as first shown by J. Ralston Skinner, of Cincinnati, and this measure is earth commensurable. Mr. W. H. Searles declares that the Egyptian cubit and the British inch are both special measures of the Great Pyramid, and he proves this in a most able paper. Prof. Smyth, Astronomer Royal of Scotland, Mr. Joseph Baxendell, Astronomer, of Southport, England, and others, declare that the monnment is astronomical in the highest and most exalted sense. Prof. H. L. Smith, of Hobart College, agrees to this. Prof. Proctor declares it to be astronomical and astrological. The evidence is overwhelming. Rev. H. G. Wood has proved that the measures of our race are correlated with the measures of the Hebrews, and are biblical and absolutely connected with the prophetic. In this, although an independent line of research, he corroborates the belief and investigations of other scientific and searching minds. To say nothing of the remarka-

ble researches of John Taylor, a host of witnesses have risen up to prove positively the geodetic, astronomical, chronological, prophetic and generally scientific character of the structure. It is only in the reverend head of the French metric society of Columbia College that we find a man who exhausts his ingenuity to ridicule the work of these excellent men who have spent their time and money in the cause of truth. Ridicule, as I have said before, is the devil's weapon.

Remember the words of that venerable man, L'Abbe Moigno, living in the very land of the meter: "Should the meter—absurd in principle (the ten-millionth part of the meridian, which varies in every part of the globe); wrong in its valuation or mensuration; expensive to an excess in its making; unmanageable without being deformed; tyrannical and barbarous in its introduction—have been imposed on all countries, my sorrow would have been inconsolable."

It is a criminal and foolish thing for a nation to abandon its hereditary weights and measures, of the origin of which it knows so little, and to adopt another system of which it knows still less, and whose origin has the aroma of hatred of all that has made the Anglo-Saxon predominant on the earth—that is, the worship of the true God.

We can safely say that the enemy has made no advances. The geodetic conference, aided and abetted by Dr. Barnard, of Columbia College, first at Rome and then at Washington, failed to get the French rod to swallow the rod of Israel, or the Anglo-Saxon.

ICE POULTICE.—Spread a layer of linseed meal, three-fourths of an inch deep on a cloth of proper size, and put pieces of ice the size of a marble on the meal at intervals of an inch; then sprinkle lightly with the meal; cover with a cloth and turn over the edges; apply the thick surface to the skin. The meal protects the skin and excludes the air from the ice, thus preventing melting.—*Technics.*

TYPHOID FEVER.—Two drops of a solution consisting of equal parts of carbolic acid and Lugol's solution may be given every three hours. Prof. Bartholow states that no form of treatment has, in his hands, been so successful. It modifies the disturbances of the intestinal tube, reduces temperature and promotes quiet.—*Coll. and Clin. Record.*

HYDRASTIS CANADENSIS (fluid extract) is an excellent local application in cervicitis, endometritis, and vaginitis, the one great objection to its use being its staining properties. In gonorrhœa, the fluid extract mixed with mucilage, as thick as can be used by injection, is of much service. It should be retained in the urethra for some time, and the urethra should have been previously cleansed with water or a solution of sodium chloride.

TUBERCULAR CONSUMPTION.—Dr. T. J. Mays (*Polyclinic*), in a review of a monograph by Dr. H. D. Didama, of Syracuse, says: The author of this address is evidently a most devoted follower of the contagion theory of phthisis pulmonalis. He sees bacilli in the breath, in the expectoration, in the atmosphere, in dwellings, in milk, in fact everywhere, and according to him life would not be worth living, were it not for the fact that these ubiquitous marauders require a "suitable soil" for their "lodgment and growth," before they are capable of beginning their work of extermination. Here Dr. Didama encounters the same fatal flaw in his theory as others have done who have reasoned in like manner: he fails to inform his readers how much work in the production of a case of consumption belongs to the suitable soil, and how much to the action of the bacilli, and until he defines this "division of labor" accurately, he is not justified in making the unwarranted assertion that "tuberculosis is caused exclusively by the bacilli." A little more research will teach that those who are most exposed to the ravenous bacilli—like physicians and attendants in hospitals for consumption, and consumptive physicians who spend most of their lives in hard labor among their unfortunate fellow sufferers in mountains and other health resorts, and in whom these organisms should certainly find in a few a suitable nidus—are not the most liable to pulmonary consumption.

Such theories, followed to their logical consequence in practical medicine, are calculated to inspire a morbid fear concerning the origin of tubercular consumption, and to become a bar to scientific investigation.—*The Epitome*.

PNEUMONIA.—If seen early, Prof. Gross would bleed the patient until the pulse became soft, and follow this by aconite, veratrum or gelsemium. He would give an active purge, perhaps of the compound infusion of senna—four ounces. Would combat the hyperpyrexia with quinine or antipyrin, and would place poultices to the chest.—*Coll. and Clin. Record*.

ABORTIVE TREATMENT OF SCARLET FEVER, ETC.—To give examples of abortive treatment by germicidal remedies, I might mention that of scarlet fever and diphtheria, where, by the administration of the biniodide of mercury every two hours in solution of potassic iodide, those germs which have found an entrance to the circulation, and whose presence there is indicated by the scarlatinal rash and enlarged cervical and submaxillary glands, are rapidly followed and destroyed, with the grand result of rapid restoration to health and the prevention of those fearful sequelæ to which multitudes have fallen victims.—Dr. C. R. Irlingworth; *London Med. Press*.

CORNS, BUNIONS, ETC.—Moisten two or three times a day with equal parts tinct, iodine and castor oil.—*W. F. Mitchell, M.D., Med. and Surg. Reporter*.

COLLES' FRACTURE—A NEW METHOD FOR TREATING.—Dr. G. F. Keene (*Boston Med. Jour.*, Dec. 24, 1885) gives the following method for treating Colles' fracture: The fracture is put up with the hand extended nearly to a right angle with the arm, and supported by a wire splint. If the forearm is placed on a flat splint so that the fingers are flexed over the end, it will be noticed that the radius does not touch the splint at all, and the ulna only on its upper third. If, however, the hand is lifted until fully extended, the radius will touch the splint at its lower end, the thenar and hypothenar eminences of the hand being lifted out of the way. The flexors act at their best advantage when the hand is thus extended, and regain flexibility and strength rapidly when the splint is removed. When the hand is clinched, it moves quite perceptibly to the ulnar side of the arm. In the treatment of this fracture, the flexor muscles should be placed at their best advantage, the extensor muscles should be placed at their greatest disadvantage, and the end of the radius should be brought down upon the splint. To accomplish these ends it is only necessary to bend a piece of ordinary telegraph wire, first, into the shape of an ordinary hairpin, then bend up sharply about two and a half inches of the closed end, flattened somewhat at the top of the bend so that the fingers may rest easily upon it at their articulation with the hand. The ends of the wire are fastened with a strip of tin curved to fit the arm, and with a second strip under the radius. By actual use of this splint he was able to report practical success.—*Am. Lancet.*

ANTIFEBRIN continues to prove a prompt and reliable antipyretic, and I see by the reports that it has been very satisfactory in the hands of those who have used it in London and Edinburgh. It seems to have some power also in controlling epilepsy. Dr. Weir Mitchell says that he has been using it with advantage, and Lepine has recommended it in the lightning pains of tabes. In one of Dr. Mitchell's cases, taking gr. x, t. i. d., there was slight cyanosis.—*Can. Med. and Surg. Jour.*

PARAFFIN IN SURGERY.—It is, perhaps, not so well known in the profession as it ought to be that paraffin is a most useful material in surgery, in many cases superseding plaster of Paris. It answers admirably for splints and for jackets for young children suffering from spinal disease. The advantages are that it is clean, light, is capable of being moulded while it is soft, and sets rapidly by pouring cold water on it. It must be procured with a melting point of 130°. When ordering it, it is necessary to specify the melting point required. The mode of using it is this: The paraffin is melted by placing a tin can containing it in a pot of boiling water. A muslin bandage well sprinkled with iodoform is put on the limb or other part to which the paraffin dressing is to be applied. Muslin bandages, loosely rolled, are allowed to soak in the paraffin for a few minutes. If much sup-

port is required, a piece of cotton-wool is also soaked in the paraffin. This is placed where most stiffness is wanted, and the bandage applied as for plaster of Paris dressing. They may, however, be drawn tight, as the paraffin shrinks from the limb in cooling. Cold water is then poured on it, and the limb held in position till the paraffin has set. When a bone tends to project, it can be kept in position by the finger till the paraffin has set. The hole left by the finger can then be filled up with some melted paraffin. In cases of compound fracture, the paraffin has the great advantage of not being effected by the discharge from the wound.

ODOFORM IN VENEREAL DISEASES.—A review of the literature of the subject, joined to his own experience with iodoform in venereal diseases, has led Dr. Bockhart to formulate the following aphorisms in regard to it:

Iodoform is not of the least use in the treatment of gonorrhœal inflammation.

Ulcers and erosions of the vaginal portion of the uterus, the result of cervical gonorrhœa, are amenable to iodoform.

Iodoform should be regarded as a specific against the virus of soft chancre, and is the best, surest and most rapid means of treating all sorts of soft chancres.

Suppurating inguinal buboes are best and surest treated with iodoform, especially after the method of Petersen.

In syphilis the internal use of iodoform is far less satisfactory in its results than that of iodide of potassium, and is most useful in syphilitic neuralgia.

Iodoform is of use against the ulcerated gumma of syphilis, alone of all its lesions, and against this it seems to exercise a specific action.—*Medical Summary*.

RUPTURE OF THE BLADDER may be definitely diagnosed without laparotomy, in the following manner: Introduce first into the rectum a Petersen's rubber bag, and distend with water, not exceeding eight ounces; next, inject through a soft catheter into the bladder, not exceeding eight ounces of warm antiseptic fluid (1 per cent. carbolic solution), note the upper line of supra-pubic dullness, withdraw the fluid from bladder and measure. If there is *no rupture*, the fluid will measure the same as that injected.—*Weir, in Medical Record*, Jan. 22.

RETENTION OF URINE, when not relieved by a sudden dash of cold water, or by a piece of ice in a napkin on the supra-pubic region, is often amenable to the application of ice to the perineum, or its introduction into the rectum.—*N. Y. Med. Times*.

BORO-CITRATE OF MAGNESIA dissolves *Renal Calculus*. A drachm to eight ounces of water; a teaspoonful three times a day. Dr. Blackley uses four grains three times a day for *Diabetes*.—*The Medical Summary*.

LACTOSURIA.—Dr. A. B. Leone defines lactosuria as the elimination by the kidneys of milk sugar formed in the breasts. The milk not being used to nourish the infant, becomes re-absorbed in the blood-vessels and lymphatics, then entering the circulation, whence it is excreted by the kidneys. Lactosuria is not observed before the seventh month of pregnancy, and is not constant in the last two months, but depends upon the development of the breasts.

In women who do not nurse their children, lactosuria is quite constant in the first five or six days of the puerperium, but is sometimes absent the first day. In the second day it is constant, but the lactose may be in small quantities. It increases on the third and fourth day and then declines.

In nursing women the phenomenon is observed during the first days after labor, the quantities of lactose varying in quantities of from one to three grammes per litre. If women stop nursing for any cause, lactosuria is promptly developed, but disappears within a few days.

Lactosuria during the first days of the puerperium, and of women who do not nurse, disappears during fever.—*Revista Char. e Therap.; Technics.*

HUNGER is not the result of a local condition, but a sensation that is only an expression of the general state of the organism, since it may be satisfied without introducing food into the stomach, as is proved by the injection of nutritive substances into the veins; and Schiff has demonstrated the same fact as regards thirst. On the other hand, a very small quantity of food introduced into the stomach of a person succumbing to starvation, and still susceptible of the pangs of hunger, will cause these pangs to cease immediately, even before any absorption has had time to take place, and consequently before there has been any possibility of assimilation. This proves, furthermore, that hunger is a reflex sensation of which the stomach is the point of departure. It is the *pain* of hunger that kills quickly, and not hunger itself. It is certain that a man in good physical health may live a long time without eating or drinking, if he does not suffer too much from the pangs of hunger. Auto-suggestion, or belief that one is nourished when one is not, is a great thing, and accounts for many phenomena otherwise inexplicable.—*Henry Howard, "Fasters and Fasting," The Cosmopolitan.*

CYSTITIS AND GENITO-URINARY HYPERÆSTHESIA.—R. Ext. Pichi (Fabiana Imbricata) fl. 3 vj; liq. potas. 3 ss; elix. arom. q. s. ʒ iij. M. Sig.—Ten drops to a teaspoonful every three hours. Remarkable improvement follows within twenty-four hours.—*Cal. Med. Journal.*

OBSTINATE CHLOROSIS attacks all young girls, without exception, in whom the menses have appeared in the twelfth or thirteenth year, and before the development of the breasts and pubes.—*Niemeyer.*

ALBANY MEDICAL ANNALS:

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VOL. VIII.

APRIL, 1887.

NO. 4.

BOOK NOTICES.

A PRACTICAL TREATISE ON OBSTETRICS. Vol. I. (4 vols.), Anatomy of the Internal and External Genitals, Physiological Phenomena (Menstruation and Fecundation). By A. Charpentier, M.D., Paris. Illustrated with four lithographic plates and 267 wood engravings. 509 pages, 8vo. This is also Vol. I. of the "Cyclopedia of Obstetrics and Gynecology" (12 vols.), issued monthly during 1887. New York: William Wood & Co.

A study of anatomy, the physiological phenomena of menstruation and fecundation; the development of the ovum; signs, symptoms and hygiene of pregnancy; normal labor; the care of the puerpera; the hygiene of the infant—these are the topics considered in this first volume.

Egbert H. Grandin, M.D., Instructor in Gynecology at the New York Polyclinic, has supervised the translation and has interpolated notes, enclosed in brackets, which represent the very recent changes in opinion and practice on certain topics.

"Charpentier's work on Obstetrics is the most complete in any language, and is a faithful and unbiased mirror of the theories and of the practice of the most renowned obstetricians of the world."

New illustrations have been substituted and added wherever it seemed appropriate. The section on Embryology has been omitted, and in its place has been substituted the chapter which Prof. Milnes Marshall contributed to Barnes' System of Obstetric Medicine and Surgery.

A PRACTICAL TREATISE ON OBSTETRICS. Vol. II. (4 vols.), *The Pathology of Pregnancy.* By A. Charpentier, M.D., Paris. Illustrated with lithographic plates and wood engravings. This is also Vol. II. of the "Cyclopedia of Obstetrics and Gynecology" (12 vols.), issued monthly during 1887. New York: William Wood & Co.

Diseases affecting the pregnant woman, indepently of the gravid state, including traumatism and erosions of the cervix; diseases of pregnancy, including displacements and distortions of the uterus; diseases of the ovum, etc.; diseases of the fœtus, death of fœtus and conseoutive changes; miscarriage; extra-uterine pregnancy.

Arguments and views are enforced by frequent tables of statistics. The book reveals an author of scholarly research and of clinical experience.

A PRACTICAL TREATISE ON OBSTETRICS. Vol. III. (4 vols.), *The Pathology of Labor.* By A. Charpentier, M.D., Paris. Illustrated with lithographic plates and wood engravings. This is also Vol. III. of the "Cyclopædia of Obstetrics and Gynecology" (12 vols.), issued monthly during 1887. Price of the set, \$16.50. New York: William Wood & Co.

QUIZ COMPEND OF OBSTETRICS. By Henry G. Landis, A.M., M.D., late Professor of Obstetrics and Diseases of Women in Starling Medical College, Columbus, O., etc., etc. Third edition. New illustrations and index, 118 pages. Price of Quiz Compend, cloth, \$1.00 each; interleaved for notes, \$1.25. P. Blakiston, Son & Co., Philadelphia. 1887.

The Quiz Compend have become very popular. They contain information nowhere else collected in such condensed, practical shape.

QUIZ COMPEND OF SURGERY. By Orville Horwitz, B.S., M.D., Demonstrator of Anatomy, Jefferson Medical College, Chief of Out-Patient Surgical Department, Philadelphia, etc., etc. Third edition, enlarged and improved. 91 illustrations, 210 pages, cloth, \$1.00; interleaved, \$1.25. P. Blakiston, Son & Co., Philadelphia. 1887.

Modern surgical philosophy, as well as topical surgery, are concisely explained. A convenient student's book.

MEDICAL ELECTRICITY. No. 3 of "Medical Briefs." By Charles F. Mason, M.D., Assistant Surgeon, U. S. Army. Introduction by Charles H. May, M.D., Instructor in Ophthalmology, New York Polyclinic. 108 pages, 12mo, illustrated, \$1.00.

"A clear, short and yet comprehensive view of this important and so illy understood branch of therapeutica."

THE NURSING AND CARE OF THE NERVOUS AND INSANE. By Charles K. Mills, M.D., Professor of Diseases of the Mind and Nervous System in the Philadelphia Polyclinic and College for Graduates in Medicine, etc. 147 pages, 12mo, cloth, \$1.00. J. B. Lippincott Co., Philadelphia. 1887.

One of a series of "Practical Lessons in Nursing," by different authors, published by the Lippincott Company. This book is the substance of a course of lectures at the Training School for Nurses of the Philadelphia Hospital, and later at the Woman's Hospital Training School for Nurses. No book devoted to the nursing of the nervous and insane had, as far as the author knows, appeared prior to the delivery of these lectures. Massage, electricity, bathing, management of drunkenness, hysteria, etc., are included.

OXYGEN IN THERAPEUTICS. A treatise explaining the Preparation of Oxygen and other Gases with which it may be combined, the Administration of these Gases, and their Clinical Effects. By C. E. Ehringer, M.D., Quincy, Ill. 157 pages, 12mo, cloth, \$1.00, postpaid. W. A. Chatterton & Co., publishers, Chicago.

Nitrogen monoxide, oxygen and air, mixed in various proportions and employed in moderate doses, have been followed by remarkable results. The "Compound Oxygen Treatment" Exposure, by Dr. William B. Clarke, of Indianapolis, Indiana (see *ALBANY MEDICAL ANNALS*, December, 1885), is given in full. The author quotes from Dr. Andrew H. Smith's prize essay on "Oxygen in Disease," and from Dr. Samuel S. Wallian's articles in *The Medical Record*.

EXCHANGES, PAMPHLETS, ETC.

Battle & Co., Chemists' Corporation, manufacturers of Bromidia and of Papine, St. Louis, Mo., send an editorial from the March number of the *St. Louis Medical and Surgical Journal* entitled "Substitution by Druggists." The *Medical and Surgical Reporter*, Philadelphia, Feb. 26, 1887, *Therapeutic Gazette*, Detroit, Jan. 15, 1887, *Alienist and Neurologist*, St. Louis, Oct., 1886, *Weekly Medical Review*, St. Louis, January 15, 1887, and several others, have spoken on this subject.

Any druggist in Albany who attempts to persuade a patient that something else is just as good or better than an article called for by a physician's prescription in the patient's hand, would probably be despised by the patient himself, and lose all his medical friends.

The Rio Chemical Co., of St. Louis, manufacturers of Celerina, Aletris Cordial, Acid Mannate, and Kennedy's Pinus Canadensis, have sent the same article, and very properly desire to have the public voice condemn the dishonesty of *substitution by druggists*.

Scientific Californian, San Francisco. 16 octavo pages, illustrated, monthly, \$1 a year.

Braithwaite's Retrospect of Practical Medicine and Surgery, Part XCIV., January, 1887. New York: W. A. Townsend, publisher. \$2.50 a year in advance; half-yearly parts, \$1.50. *Braithwaite's Retrospect* supplied in conjunction with *The Epitome* (monthly, W. M. Carpenter, editor, New York, \$2.50 a year), a total of 1,500 octavo pages, for \$4.50 in advance.

Building, for April 2d, contains eight full-page plates of churches from five church architects, and several designs for city and country houses. School architecture will be made the special subject of an early number. W. T. Comstock, publisher, 6 Astor Place, New York.

The Microscope. Edited by W. P. Manton, M.D., F.R.M.S., Frank W. Brown, M.D., George Duffield, M.D., Charles G. Jennings, M.D. Detroit, Mich. 32 pp., 8vo, monthly, \$1 a year.

Parke, Davis & Co. have presented us with a portrait of the great German savant, Dr. Koch, which is well worthy of a place in every office. Our readers will receive a copy of the same on application to Parke, Davis & Co., Detroit, Mich.

Battle & Co., Chemists' Corporation, St. Louis, send a communication from Dr. Thos. Little, Spirit Lake, Iowa, comparing Papine with other forms of opium. Opium and other narcotics had caused constipation, nausea and nervous prostration in a certain case. Papine was subsequently used with the happiest effect.

MEDICAL NEWS.

ALBANY COLLEGE OF PHARMACY.

The sixth commencement exercises of the Albany College of Pharmacy were held in Geological Hall, Tuesday evening, March 8, 1887. Holding's excellent orchestra discoursed popular music. The Rev. A. G. Rogers offered prayer. Professor Willis G. Tucker, president of the faculty, conferred degrees upon the following members of graduating class:

J. E. Mace, Cohoes, president; J. H. Sutliff, Johnstown, vice-president; E. F. Hunting, Albany, secretary; E. J. Simpson, Buffalo, treasurer; J. J. Barton, Albany, valedictorian; W. A. Livingston, Albany, alternative; H. A. Baird, Gloversville, J. S. McFadden, Massena, C. H. Bowen, Norwood, L. Le Brun, Albany, executive committee; A. W. Ellington, Albany; A. L. Grady, Green Island; I. W. Kellar, Hudson; F. D. Ostrander, Hudson; W. S. Pulver, Ilion; F. W. Schaefer, Albany; W. H. Spangenberg, Albany; H. W. Veeder, Schenectady.

The stage was occupied by Mr. Archibald McClure, Dr. A. B. Huested, Dr. Willis G. Tucker, Prof. G. Michaelis, Prof. P. W. Bedford, the Rev. A. G. Rogers and Charles H. Gaus. Prof. Bedford, of the New York College of Pharmacy, made a facetious address to the graduates. He said that the candidates should appreciate such an honor as the Albany College of Pharmacy had conferred upon them. Then he outlined the gradual

but steady improvement of the implements of the knights of the mortar and pestle, and said in substance:

Modern chemistry placed them on a par with other scientists. Scheele made some of the most important discoveries in chemistry, and without doubt was the greatest chemist the world has ever seen. Glycerine, one of his discoveries, was a mystery for 65 years, and now startles the whole world with its great power. There are Rip Van Winkles in pharmacy, who hold to their old dispensatory and the first ideas they acquired. They never want new remedies, saying there are too many already, and they use avoirdupois instead of Troy weight, and everything they put up is wrong. Drones have no place in the profession, and pharmacists never have political aspirations. Leave politics severely alone. The profession is a hard-working one, and but few reach independent riches. It does not include any Astors, Stewarts or Goulds. Those who look upon it as a direct road to wealth are mistaken. It suffers from renegades, who tell the public they are paying fabulous prices. On your entrance into active life be prepared for steady care and wide labor. Devote yourself to steady, careful application, and follow your text-books closely. Pharmacy is the twin brother of medicine. Never enter the field of the physician. Your articles are to be pure and up to the standard; your duty to know that the articles you prepare are as the medical man expects. Be always in a receptive mood; always be a student, and never forget the instruction at college. If the goods you sell cost nothing, the profit you would make would not be excessive. Go to your future business and honorable character.

PRIZES AND HONORS.

Handsome floral tributes were given the graduates. The valedictory of Jacob J. Barton was a careful and well prepared paper. Prizes were awarded as follows:

William A. Livingston, for the best thesis on "Carbon;" Edwin F. Hunting, for the most proficiency in all the branches; Harman W. Veeder, William S. Pulver, J. Edward Mace, J. J. Barton, William H. Spangenberg, of the senior class, received honorable mention. The faculty prize of \$20 for the best examination was won by Walter H. Connelly, of the junior class. Honorable mention was made of W. C. Barnett, L. A. Bellgrade, H. H. Dimmick, E. L. Gaus, F. E. Niblette.

The alumni association, the faculty and several guests enjoyed a banquet at the Delavan, after the commencement exercises were concluded.

THE ALUMNI ASSOCIATION OF THE ALBANY COLLEGE OF PHARMACY has elected these officers:

President, De Baun Van Aiken, '85; first vice-president, H. M. Sweet, '87; second vice-president, J. Baird, '87; secretary, J. J. Barton, '87; treasurer, J. Harley, '85; historian, Charles M. Gilbert, '86; executive committee, Leonard H. Wheeler, '88, G. V. Dillenback, '85, H. Pareira, '86.

NEW YORK SKIN AND CANCER HOSPITAL.

The fourth annual report of the New York Skin and Cancer Hospital shows a prospering condition of this worthy charity. The medical profession feel an interest in this unique institution, because it provides for the care of diseases which are likely to receive but a secondary interest in a general hospital, and gives an opportunity for study of them where they are of paramount importance. A good beginning has been made in one very valuable feature of this work, by which a country home has been provided within easy reach of the city, at Fordham, where seventeen acres picturesquely situated overlooking the Harlem river have been procured and two pavilion cottages erected. The record of work for the year is creditable, 1,415 new cases as hospital and out-patients having received treatment. Drs. L. D. Bulkley and George H. Fox have the principal charge of skin diseases, and Drs. J. E. Janvrin, Daniel Lewis and Frank Hartley of cancer cases. Patients may find accommodations at as low a rate as one dollar a day, and a considerable number, doubtless properly from New York city, have received free care.

We shall look with interest at the future history of this almost the only special hospital for skin diseases and cancer in this country.

SUIT FOR MALPRACTICE—A PHYSICIAN VINDICATED.

On the 27th day of February, 1886, a very cold day, the mercury ranging below zero, Mrs. Hannah Blackburn, of West Troy, fell and broke her arm, producing Colles' fracture. Dr. R. H. Sabin was sent for, who set and dressed it, and called the two following days and found all doing well. He then told Mrs. B. to go to Dr. L. R. McLean, a surgeon of Troy, and have him attend it, who examined it and found it well dressed, and directed her to return and have Dr. W. B. Sabin attend it, saying it would be all right. Dr. W. B. being otherwise engaged, his father again took charge of the case, and saw it on the seventh day of the fracture, dressed it and found it all right, and made an appointment to see it again in three or four days. He accordingly called on the ninth day of the fracture, but did not find her at home, and went again on the next day, dressed it and found it doing well. He then said he would call in three or four days, when the patient said he need not call, but that she would call at his office and have it dressed, which she failed to do. Dr.

Sabin saw no more of the case until four weeks after, when the patient called and complained that the arm pained her and that it was not set right, and that she had been to Dr. Thompson, of Troy, and had it broke over again, and that she would sue him for damages.

Dr. Thompson was ready to testify that the bones were in perfect opposition, and that all he did was to limber up the muscles. A neighbor was ready to testify that instead of going to the doctor's, as she had promised, she undid the dressings and bathed the arm herself. Dr. McLean was ready to testify that when he saw the case, the fourth or fifth day of the fracture, that it was well set and well dressed.

Mrs. Blackburn sued Dr. Sabin for \$10,000 damages in the supreme court of Albany county. The case came up for a hearing on the 14th of March, 1887, before Judge Parker, who, on hearing the particulars of the case, dismissed it from the calendar and gave the doctor a judgment against Mrs. Blackburn for \$99.44. Thus ended the suit for malpractice.

THE DANA NATURAL HISTORY SOCIETY announce a course of lectures upon scientific subjects, to be given during May and June, upon Saturday afternoons, in the chapel of the Albany Female Academy. So far as at present arranged they will be as follows: May 7th; May 14, "The Mosquito," by Prof. Lintner; May 21, "Diatoms," illustrated by stereopticon, Dr. T. F. C. Van Allen; May 28, "Astronomy," by Prof. Boss; June 4, "Fungi," by Prof. Peck.

The first lecture is still undecided, but it is thought will be upon some department of chemistry.

Dr. Van Allen's lecture upon diatoms will be illustrated by the photo-micrographs used to illustrate the paper read before the Medical Society of the County of Albany (See ALBANY MEDICAL ANNALS for March, 1887), in addition to a number of new photo-micrographs.

Tickets will be ready about May 1, and can be secured from members of the society.

THE ALBANY PHARMACEUTICAL ASSOCIATION, April 14th, elected the following officers: F. J. Smith, president; C. E. Lloyd, vice-president; Joseph Bandorf, treasurer; George R. Cardwell, secretary; Charles Van Loon, J. H. Miller, A. B. Husted, G. E. Ferguson, W. W. Macomber, executive committee.

PERSONALS.

—The wedding of Miss Margaret Louise Marcellus and Dr. Edmund F. Bronk (A. M. C., '84), at the First Presbyterian Church at Amsterdam, Wednesday, March 9, 1887, was a most brilliant affair, and was attended by nearly 600 prominent citizens of Amsterdam and many from Albany. The Rev. Charles Baldwin officiated. Miss Imery, of Amsterdam, was bridesmaid and Dr. T. F. C. Van Allen ('82), of Albany, was best man. The ushers were Dr. E. E. Larkin ('85) and Dr. W. C. Marselius ('84), of Albany, and Dr. Strover and Mr. Reynolds, of Amsterdam. The bride wore white silk and diamond ornaments. After the ceremony at the church there was a reception at the home of the bride's parents at which about 200 guests were present.

—Dr. Horace R. Powell ('82) has been appointed health officer by the Board of Health of Poughkeepsie, N. Y., in place of Dr. John R. Cooper, deceased.

—Dr. W. W. Betts ('83) was chosen health physician of the town of Kinderhook, at the meeting of the town Board of Health in March.

—Dr. W. B. Ambler ('83), of New Lebanon, N. Y., died Tuesday, April 12, 1887, in his 29th year, after a week's illness with diphtheria. He had twice previously suffered with this disease, the second attack being very severe. He was married last summer to Miss Margaretta Brown, daughter of Mr. H. L. Brown. He was the last of five children, all of whom are now dead. His former home was in Saratoga county.

—Dr. Solon Briggs ('69), Room 16, 177 Broadway, New York city, advertises a splendid opening for a physician, in a prosperous and beautiful town in western New York, on the line of three railroads, all trunk lines stopping. The house, with double lot, cost \$18,000; price only \$8,000.

—Dr. Clinton B. Herrick ('80), of Troy, N. Y., sailed on Red Star steamer "Waesland" en route to Vienna, for the special prosecution of surgery.

—Dr. M. L. Rhein ('80), D.D.S., of New York, is the inventor of the "Prophylactic Tooth Brush." *The American System of Dentistry*, published by Lea, Son & Co., endorses the "Prophylactic" as the only correct brush, and publish a full-size illustration.

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CONVERGENCE ANOMALIES: THEIR CLAIM UPON THE INTEREST OF THE GENERAL PRACTITIONER.¹

BY C. M. CULVER, M.D., ALBANY.
(ALBANY MEDICAL COLLEGE, 1861.)

Mr. President and Gentlemen:

It has long been a theory of mine that, in making a speech, one should abstain from speaking of speeches or of himself. But our practice is often at variance with our theories; and, at the risk of setting an example to be shunned, I desire to ask your indulgent audience to a few preliminary remarks concerning the preparation of this paper.

The subject of which it treats is a vast one. A superficial presentation of it would be alike unprofitable to auditors and reader. An exhaustive treatise on it would fill a volume of our **MEDICAL ANNALS**. My aim has been to realize a happy medium, between such extremes, which could concisely present the important points acceptably to my colleagues in general practice, to whom the article is addressed.

During eight years of study of the subject, I have collected notes of 229 cases. Tabulation of them would give undue prominence to some, and not enough to others. After discard-

¹ Read before the Medical Society of the County of Albany, Wednesday evening, February 9, 1887.

ing all but sixteen, to be used at this time, I found that, with the theoretical discussion essential to utility, their histories would make a longer article than could properly be read at this meeting. On revising and re-writing the paper for the fourth time, I found myself forced, however great my reluctance to do so, to entirely omit some of the remaining cases, present only a syllabus of my records of others, and give the histories of only two or three cases with any thing approaching fullness. The fact of their being *selected* cases is compensated by their *typical* character.

Unyielding limits of time and space have demanded a rigid exclusion of rhetorical embellishment and divested my task of half its pleasure.

I will not "hedge" by promising a supplementary article, to be read in the future; but, having accumulated much more material than could be used on this occasion, I cherish a hope of hereafter placing it at the disposal of the profession.

My thesis is that convergence anomalies merit the attention of general practitioners, who, by recognizing the importance with which such disorders are really invested, may be enabled to relieve some patients whose affections would otherwise appear obscure and intractable.

In support of this thesis, I purpose adducing evidence derived from the published statements of other investigators and from my own experience in practice.

Dr. Ambrose L. Ranney, a prominent neurologist, says: "Although much has been written, within the past few years, in relation to the deleterious effects of errors of refraction and accommodation of vision, and the condition known as 'muscular insufficiency,' upon the functions of the nervous system and viscera, the profession at large is not yet thoroughly awakened to the importance of the detection and correction of such errors."¹

Again he writes: "I believe that the symptoms of sick-headache are reflex in character, to a large extent, and are due primarily, in almost every case, to some optical defect."² Again the same writer says: "I do not think the relationship between 'eye-strain' and attacks of headache or neuralgia can be denied."³

In a special discussion of insufficiency of the recti muscles, Dr. Ranney also says: "It seems to vary with the nervous con-

¹ New York Medical Journal, vol. xliii., p. 229.

² Loc. cit., p. 231. N. B.—"Optical" is probably a misprint for "ocular."

³ Loc. cit., p. 283.

dition of the patient;¹ it is an important factor in many subjects afflicted with headache. I have known it to cause vomiting and so-called periodical 'bilious attacks,' by exciting a reflex irritability of the central nervous system."²

An editorial note in the *New York Medical Record* for December 23, 1882, reads: "The fact, long known to the profession, that error in visual refraction may cause sick-headache, is now being widely circulated again."

Dr. Henry B. Noyes asserts that "not a small percentage of headaches originate in disorders of the ocular muscles. Sometimes dizziness occurs and nausea."³

Dr. C. S. Bull says: "Many cases of obstinate headache, which have resisted all treatment, originate in disorders of the ocular muscles and disappear when these disorders are corrected."⁴

Several pages might be filled with similar citations; in most cases, however, the writers have grouped refractive and accommodative errors with the anomalies which I wish, herein, to discuss as exclusively as possible. What relative importance such authors have ascribed to any single member of the group cannot be determined. Hence such citations are, by this lack of discrimination, divested of much of their value for me with my present purpose.

From the frequency with which my colleagues have asked me to aid in the treatment of general neuroses, I infer that the importance of ocular defects, as causative of such conditions, is recognized by those whom I have the honor to address.

The assumption that ocular anomalies may produce functional disorders in other organs has the support of the converse proposition, that diseases of other organs may produce asthenopia. Dr. Thomas R. Pooley⁵ and R. J. McKay⁶ have written instructively on this head.

Permit me to make another parenthetical statement. For several years I have been annoyed by the disposition, so frequently manifested, especially by laymen, to speak of "curing disease through the eyes." Nobody could deprecate more

¹ Loc. cit., p. 232.

² Loc. cit., p. 286.

³ *Diseases of the Eye*, p. 88.

⁴ In Goelberg-Wells, *Diseases of the Eye*, p. 719, Fourth American Edition. Compare Dr. G. T. Stevens, *Transactions International Medical Congress*, London, 1881; also Martin and Javal, *Archives d'Ophthalmologie*, vol. iv., p. 170.

⁵ *New York Medical Journal*, vol. xliii., p. 179.

⁶ *American Journal of the Medical Sciences*, Oct., 1882.

heartily than I do the use of this common expression. The idea back of it seems to be that if a headache is relieved, as the result of eye-treatment, the treatment must be magical rather than material. There really is, of course, nothing more mysterious in the connection between ocular defects and some general neuroses than there is in the production of trismus from a wound of the foot. The sooner everybody will permit oculists to be regarded in their proper light, as *medical practitioners*, and cease to consign them to the category of necromancers, magicians and astrologers, the greater will be my personal gratification.

Let us now enter upon some

THEORETICAL CONSIDERATIONS.

In a pair of *normal* eyes, the analogous functions of accommodation and convergence are most intimately associated. For distinct vision of objects at a practically infinite distance, no effort of either is necessary. If such eyes wish to see a near object binocularly, single and distinctly, an equal number of metre angles of convergence and dioptries of accommodation are brought into requisition. Neither function, in such eyes, can be easily performed, unless an equal demand is put upon the other.

A child who is hyperopic must use accommodation in order to see even distant objects distinctly; but, if this be done, nature demands that there be an equal effort of convergence. Convergence, during vision of distant objects, produces diplopia, to disembarass himself of which the child ignores the retinal images of one eye; in other words, he renounces binocular vision for the sake of seeing distinctly. Then the unemployed eye constantly deviates toward the nose, and we have a typical case of convergent strabismus, produced by hyperopia.¹

On the other hand, one principal reason why a presbyope is annoyed by his first pair of glasses lies in the fact that these act as auxiliaries to the accommodation, but do not furnish corresponding aid to the convergence.

Some simple experiments, of which a description follows, will render apparent the evil effects of dissociating the two functions in question.

¹ Compare Boucheron on the treatment of convergent strabismus by mydriatics, *Archives d'Ophthalmologie*, vol. ii., p. 47.

An emmetrope, not presbyopic, can read for hours, under fair conditions of print and illumination, at a distance of 16 inches, without fatigue. In doing so, he exerts 2.5 dioptries of accommodation and the same number of metre-angles of convergence.

If he wears a pair of spectacles in which each glass is a combination of a convex lens of 2.5 dioptries and an abducting prism of 9 degrees, he can read as comfortably as before, and at the same distance, with perfect repose of the ciliary and internal recti muscles; because these glasses do for him just what his eyes, in the first instance, did of themselves.

But if he wears only the convex lenses, his convergence must be exerted as much as if he had no glasses, while the accommodation is entirely inactive for reading at the prescribed distance.

If, on the other hand he wears only the prisms above mentioned, and undertakes to read as before, the convergence must not be exerted at all, while the ciliary muscle must do just what it does when no glasses are used.

With either of the two last-described pairs of glasses, which dissociate accommodation and convergence, our emmetrope cannot read, at the given distance, for even fifteen minutes without great annoyance, and persistence in the attempt will almost inevitably result in a severe headache for the experimenter.

These experiments, which may be varied *ad libitum*, are perfectly fair, and furnish conclusive evidence of the disastrous results arising from dissociation of the functions in question.

We have just been dealing with normal eyes, in which the anomalous condition has been artificially introduced; while, as Landolt pointedly remarks, normal eyes are precisely those with which we, except as physiologists, are not concerned. However, it makes no material difference whether the anomaly is introduced by glasses, by atony of the lateral recti muscles, or by their spasmodic contraction; the result is practically the same in all such cases. But the exact form which this result will assume, in a given case cannot be predicted, as we may readily believe if the statements of the authorities already cited are credible.

In view of the effects of dissociating the special functions under consideration, it must be apparent that glasses ought never to be prescribed without due regard being had to their convergence. Unfortunately for those who need glasses, rule-of-thumb prescribing is much too common.

I beg you to note, gentlemen, that the term convergence, as here employed, does not stand for a passive state, but for the result of voluntary or involuntary muscular effort. The necessity for this distinction is rendered strikingly manifest by the history of a case recently reported by my associate, Dr. Thomas Featherstonhaugh, in *The American Journal of Ophthalmology*.¹ The patient's trouble consisted in excessive passive convergence; of active convergence he had none at all. A tenotomy of each internal rectus muscle destroyed all of his passive convergence; Then, by orthoptic training, active convergence was developed, and the patient entirely and permanently relieved.

Again, I would call attention to the fact that, following Landolt's example, I do not use the term divergence, but call that which has usually been so designated *negative* convergence. Neither convergence nor divergence can be properly affirmed of such spheroids as the eye-balls represent. It is the latter's *lines of fixation* that are convergent or divergent. When the corneæ approach the median plane of the body, the *real lines of fixation converge* toward some point *in front of* the eyes. We call this *positive* convergence. When the corneæ are carried so far away from the median plane that the real lines of fixation are no longer either convergent or parallel, *their posterior prolongations converge* toward some point situated *behind* the eyes. Hence the propriety of the name *negative* convergence. Such a mode of employing the terms is precisely analogous to that of styling myopia *plus*, and hyperopia *minus*, refractive power.

Before proceeding to the citation of cases, let us determine what limits of convergence may be regarded as normal. In this connection it gives me pleasure to recognize the capital importance of the investigations made by my friend and teacher, Dr. Landolt. At the thirty-sixth annual session (in 1885) of the American Medical Association, Dr. White, of Richmond, said, in his report as chairman of the section on ophthalmology: "The most important ophthalmic work of the past year is Landolt's labor to find the exact method of determining the amplitude of convergence."² With such appreciation of the work in question I feel the most cordial sympathy.

Landolt's conclusion, as the result of his inquiry, was that no certain *amount* of convergence could be predicated as normal,

¹ Issue of November, 1886. Also in Albany Medical Annals, February, 1887.

² Vide The New York Medical Record, issue of May 9, 1881, p. 524.

since the amount must vary according to the requirements of each case. His working hypothesis, which, provisionally, he declines to call a rule, is that at least two-thirds of positive convergence must be the *quota* held in reserve by means of which to sustain a given effort. For continued reading at a distance of thirteen inches (one-third of a metre) a convergence-effort of three metre-angles must be exerted. But, according to the above hypothesis, this effort, if it is to be sustained, must not call for more than one-third of the convergence at disposal. Hence the total must be three times as great, or nine metre-angles. This is approximately represented by the ability to overcome the action of adducting prisms aggregating sixty degrees. As we rarely need to work with objects at a distance of less than thirteen inches from the eyes, we may call nine metre-angles the normal amount of positive convergence, although it is generally the least amount compatible with comfortable use of the eyes for near work. Fourteen metre-angles of it are consistent with physiological conditions.¹

Negative convergence is, evidently, of little practical utility. Normally, it ought to amount to one metre-angle, equivalent to the ability to overcome the action of abducting prisms aggregating seven degrees.

If we bear these figures in mind, it will aid in the estimation of insufficiencies referred to in subsequent reports of cases.

CASES.

CASE I. is that of a lady, Mrs. C., aged 26, to whom my services were kindly recommended by Dr. Franklin Townsend. For two years before consulting me she had suffered from almost incessant headache. At the time her trouble commenced, she consulted, with reference to it, a specialist in eye diseases. He gave her the equivalent of the weakest concave lens in our trial sets, for one eye, and a plain glass for the other. Of course the only effect of such glasses was to hurt her nose. There really existed, in both eyes, refractive errors, of so slight degree, however, that I corrected them with the requisite glasses, for only only occasional use, mounted as a hand lorgnette.

The amplitude of convergence was very restricted. The negative portion was normal, but the positive only two metre-

¹ My own positive convergence power enables me to overcome the action of adducting prisms aggregating 98 degrees, or to see single, and binocularly, an object distant three inches; hence it amounts to about 14 metre-angles.

angles. She consulted me in June. Having planned to spend the summer at the sea-shore, whither she intended to go a few days later, the patient could not be under my immediate treatment before her return to the city. Accordingly I instructed her in orthoptic training, to be carried into execution by herself. This exercise, during the succeeding four months, increased the positive convergence to five metre-angles, which amount was still inadequate and the headache persisted, although its severity had diminished. In October she paid me a daily visit for a week and underwent a course of orthoptic training, carried on by myself. By this means the positive convergence was made to equal nine metre-angles. The headache ceased. Once a week for a month thereafter I received a call from the patient. At each of these times the amplitude of convergence was found to be normal as to both amount and distribution. There had been no recurrence of headache.

Recognizing this as a case furnishing strong conclusive evidence of the production of cephalalgia by insufficiency of the internal recti muscles, and being desirous of eliminating any personal prejudice of my own in estimating the effect of the treatment, I requested Mrs. C. to state her opinion of it. This statement was entered, *verbatim*, on my case record, and reads as follows: "Whereas I used to have headaches all the time, I now have none at all. Although fond of theatre-going, I have not indulged in that pleasure for years, because it meant to suffer from a violent headache on the following day. Last week I was in New York, when I went to the theatre several times, without feeling any consequent discomfort."

Later reports have been equally favorable.

CASE II.—Miss G., school-girl, aged 13; referred to me by Dr. Vander Veer. The patient is anæmic and debilitated, is extremely "nervous," and has, for months, suffered from nearly constant headache. (There is no menstrual difficulty.) I find hyperopia of 0.75 dioptry in each eye. (Tonic spasm of the ciliary muscle has made her *appear* myopic, and she has been wearing *concave* lenses, selected by a dealer in spectacles.) Positive convergence amounts to only a trifle more than two metre-angles; the negative is normal. The treatment consists of complete mydriasis, and convex lenses to fully correct her hyperopia; (these glasses are for temporary use, and are prophylactic against a recurrence of the ciliary spasm;) also orthoptic train-

ing, in conjunction with an appropriate fortifying regimen.

Result.—The combination of general and special treatment is so successful that, ten weeks after commencing it, the patient reports that, for a month past, she has enjoyed entire immunity from headache. The improvement in her general appearance is very noticeable.

Note.—Perhaps this case would better aid in defence of my present thesis if general tonics had not been exhibited. But my aim in practice being to afford relief, rather than to prove the causative import of any ocular disorder, I invariably combine general with special treatment, when indications for it exist.

CASE III.—Mr. M., student, aged fifteen when referred to me, in 1883, by Dr. J. S. Mosher. The difficulties from which he sought relief were frontal and temporal headaches, with the other customary symptoms of muscular asthenopia. His sole ocular defect, at the time, was insufficiency of the interni. The treatment consisted of orthoptic training, continued two weeks. It resulted in augmentation of the positive convergence and relief from the symptoms usually complained of.

Two years later, after a period of unusual demand upon the eyes, asthenopia recurs. This time orthoptic training establishes a perfectly normal convergence-amplitude and affords prompt relief.

In the fall of 1886 a second relapse occurs. An inherited predisposition to myopia has begun to make itself felt, and each eye is now myopic by 0.75 dioptry. I am usually loath to correct so low degrees of myopia; but the patient is about to enter upon a college course, which is to cover a period of four years, and during which the myopia is likely to increase.¹ This probability, in conjunction with the facts that he will not be under my observation, and that muscular defects promote the progress of myopia,² induces me to prescribe the full correction of his refractive error. Such glasses tend to harmonize the functions of accommodation and convergence. After wearing them a month, the patient writes: "My eyes have not caused the least trouble." I have seen him during the past week, and the report remains favorable.

¹ Compare statistics of Cohn, von Reuss, Derby, Seggel, Ott, Reich and Eismann, in Landolt: *The Refraction and Accommodation, etc.*, p. 442, et seq. Within a period of three years, Dr. Derby found that over 10 per cent. of the emmetropes in Harvard College became myopic, while more than 21 per cent. of the myopes became more so.

² Landolt, loc. cit., p. 438.

CASE IV.—Miss S., a school-girl, aged 13; referred to me by Dr. S. B. Ward. I desire to save time by merely sketching the history of this case. The patient suffered from daily recurrent headache and gastralgia, which were intractable by the approved remedies. (There was no menstrual difficulty). The ocular defects were refractive errors and insufficiency of the *interni*. Correction of the refractive errors gave perfect relief, which lasted ten months. Then a relapse occurred. Dr. Ward a second time assigned the case to my department, after having, at my request, kindly re-examined the patient. This time the only eye-affection was muscular insufficiency. Appropriate treatment has been beneficial, but is still in progress. The result cannot, therefore, be reported, but experience with similar cases affords ground for hope that it will ultimately prove satisfactory.

CASE V.—Miss W., aged 22; referred to my care by Dr. William Hailes, Jr.; the general affection consists of extreme “nervousness” and frequent attacks of severe headache. Each eye is myopic by 0.5 dioptry; positive convergence amounts to only 3.0 metre-angles, while the negative exceeds normal limits by half a unit. Treatment, by orthoptic training and Dyerism, results in marked relief from the troubles which led her to seek medical advice.

CASE VI.—Miss M., seamstress, aged 25. For an opportunity to examine this case I am indebted to Dr. James P. Boyd. The general affection consists of vertigo and “neuralgia.” The ocular defects are hyperopia of 1.75 dioptry in each eye, and convergent strabismus, which causes diplopia when the patient looks at distant objects. This diplopia is corrigible by an adducting prism of twelve degrees. The right eye is somewhat amblyopic from disuse, its acuteness of vision being only one-tenth of the normal. (The patient had convergent strabismus when she was ten years old; it was caused, in the manner already explained, by her hyperopia. At that time Dr. C. A. Robertson operated, successfully, for the correction of the strabismus. But, as she wore no glasses after the operation, the original cause remained operative and reproduced the strabismus. She repels my suggestion of a second operation and demands, instead, all optical aid possible.) I prescribe working-spectacles in which a convex lens corrects all the hyperopia of the left eye, and a ground glass excludes the amblyopic right from participation in vision. For distant sight, each eye is furnished with a convex lens of one

dioptry, combined with an adducting prism of four degrees; these distance-spectacles correct four-sevenths of the hyperopia and two-thirds of the diplopia.

Result.—I expected the *externi* to learn to correct the remaining one-third of the diplopia, and the expectation was soon realized. After wearing her glasses two months, the patient reported, while using the working spectacles, she was able to sew with comfort; and, when she wore the compound glasses, distant objects no longer appeared doubled; the vertigo had ceased and her neuralgia had been greatly diminished.

CASE VII.—Mr. D., civil engineer, aged 24; in seeking my opinion of his case, he acts on the advice of Dr. W. L. Pearson, of Schenectady. The general affection consists of frontal and temporal headaches, such as are usually found in connection with muscular asthenopia. Examination reveals myopia of 0.5 in each eye, probably acquired during his course, recently concluded, at Union College.¹ The negative convergence is normal, but the positive amounts to less than two metre-angles.

Treatment.—The myopia being of so low degree, no glasses are prescribed. (The patient is conversant with elementary physiology and optics, and is very intelligent; he readily understands my explanation of his difficulty and how it may be relieved. Treatment under my immediate supervision is rendered impracticable by the nature of his occupation.) According to my instruction, he practices orthoptic training by himself.

Result.—The following is an excerpt from a letter which I have received from him: "I came to see you, about seven months ago, concerning my eyes, and am thankful to say that, having followed your directions, they are now stronger than they have been for years." He makes no special mention of the headache, but it is fair to infer, from experience with analogous cases, that this ceased with his other asthenopic symptoms.

CASE VIII. is that of a gentleman, Mr. T., 33 years old, to whom my services were recommended by Dr. E. A. Bartlett. The general affection was dizziness,² which rendered the patient nervous and apprehensive of brain disease. His ocular defects consisted of simple myopic astigmatism in the left eye, and restriction of the positive portion of the amplitude of convergence, which amounted to only three metre-angles. The negative

¹ Compare foot-notes of Case III.

² Compare Noyes, *Diseases of the Eye*, p. 88.

convergence was normal, the right eye was emmetropic, and the refractive error of the left was of so slight degree that its correction would not have compensated the annoyance of wearing glasses. Hence none were prescribed. I requested Dr. Bartlett, who had the patient under treatment, to use the constant current topically, as a stimulus to the contractility of the *recti interni*. At the same time, I instituted a course of orthoptic training. The affected muscles responded promptly to this double stimulation, and the positive convergence was soon raised to the normal amount. The asthenopia and vertigo entirely disappeared, and I believe the relief has been permanent.

CASE IX.—Mrs. W., aged 28, referred to me by Dr. H. V. Hull, of Schenectady. This patient was a type of neurasthenia and suffered from chronic headache. I found manifest hyperopia of one dioptry in each eye. Positive convergence amounted to only two metre-angles, while the negative was normal in amount. The patient had previously consulted three oculists, one of whom had prescribed convex glasses, which, however, she had neglected to wear. I found them adapted to her requirements and insisted that she should use them. Orthoptic training, covering a period of nine days, raised the positive convergence to the normal amount; thereafter the patient maintained the acquired power by continuing the exercise, according to my instruction, at her home. A few weeks later she reported that her headache had entirely ceased. Still later, and after the lapse of a considerable time, I learned, indirectly, that this gratifying result was persistent.

CASE X. is one whose history is peculiarly instructive. To present in detail, however, would expose me to the risk of being tedious. The case is not my own, but is one reported by Mr. Brudenell Carter,¹ of St. George's Hospital, London; for whom, by the way, although acquainted with him only through the medium of his works and a slight personal correspondence, I have long entertained a profound admiration. Besides being a remarkably able ophthalmologist, he commands a literary style which is worthy of emulation by all writers on scientific subjects. His outspoken appreciation of good work done by Americans is especially deserving of our recognition.

The following is a summary of the case: A student, who was reading for honors at his university, broke down, with symptoms

¹ Eyesight, Good and Bad, p. 144; and Diseases of the Eye, p. 564.

which a provincial practitioner attributed to brain disease. Acting on medical advice, he went home and rested, but got no better. Then a London physician confirmed the original diagnosis and prescribed a voyage to Australia and back, with a view to complete rest of the brain; the patient made the voyage, but no relief resulted from it. He was then pronounced incurable. He gave up the hope of succeeding to his father's business, which had furnished a brilliant prospect, canceled a matrimonial engagement which he had made, and abandoned himself to despondency commensurate with his misfortunes; to use the author's expression, "his whole life was blighted." He was finally brought to Mr. Carter, not with an idea that his eyes were at fault, but to see if ophthalmoscopic examination would throw light on the state of the cerebral circulation. The eyes were found healthy, but myopic by five dioptries. The patient had never used spectacles. The *interni* had rebelled at being required to furnish five metre-angles of convergence, while the accommodation was at rest. His symptoms had been intense headache, vertigo, palpitation of the heart and occasional nausea, when he studied long at a time. Mr. Carter prescribed spectacles to partially correct the myopia and *diminish the convergence-effort* necessary for reading. The result was a perfect and permanent cure; the patient could read as much as he liked, was able to take up the career which he had fancied was closed to him forever, and, though last, not least, to carry into execution his original intention of committing matrimony.

Perhaps this abridged version of the story does not make clear the connection between the special and general condition; but Mr. Carter's certainly does; and it is worthy of note that if convergence had not entered into the account, this young man would have been conscious of no eye-trouble. Either of his eyes, without the coöperation of its fellow, could have read at a distance of eight inches (to which its static refraction adapted it) without even an effort of accommodation.

CASE XI. is the last, and perhaps the most interesting, that I have to report. Miss S., aged 15, was referred to me by Dr. Thomas Beckett, in the hope that I could relieve the chorea with which she was sadly afflicted. Her home was in Westchester county, and a physician near there had promised to cure her in eight months. She had been under his treatment for a year, and had made no improvement. I thoroughly atropized

both eyes and found each to be myopic by 2.25 dioptries; insufficiency of the interni is a common finding in myopes, and was present in this case.

I told the patient's friends that her eyes needed treatment, whether it should ultimately affect her general choreic condition or not. I explained to them how the ocular defect, as a source of nervous irritation, *might* be causative in the production of the chorea. But, though emphatically advising that her eyes be treated, I made no promise to cure any thing, and was cautious not to lead them to hope that I would, as they persistently expressed it, "cure her St. Vitus' dance through her eyes." As they wished me to treat the case, I prescribed the full correction of the myopia and, by orthoptic training of the *interni*, developed the previously deficient convergent power. At the outset, the jactitations were so vigorous and frequent that the trial-frames were only with difficulty kept in place during the subjective examination of the acuteness of vision. As soon as the development of the positive convergence was fairly in progress, I noticed a slight improvement in her general condition. This I abetted by the use of strychnia and other appropriate tonics. In short, I conjoined, with the special, just such general treatment as I should have prescribed for any choreic patient, irrespective of ocular complications. The result was most gratifying. After six weeks of combined special and general treatment, her condition justified the patient's dismissal; she called on me, for the last time, when on her way to the train which was to convey her to her home, down the river. On this occasion her only choreic symptoms were slight and infrequent twitchings of the *alæ nasi*, not more marked than I have observed in myself after protracted study and excessive smoking.

A few months later there was a recurrence of the muscular insufficiency and mild choreic symptoms; as prolonged treatment was then impracticable, recourse was had to a tenotomy of one *rectus externus*, which afforded prompt relief. About seven months later, in January, 1886, the patient again called, to show me, as she said, that she was quite free from chorea; and such, indeed, was the case, for aught that I could see to the contrary. She has not reported to me since that time, but I think reasonable grounds exist for the assumption that the result has been permanent.

Let us note, in reference to this case, that, before I saw her, she had received such treatment as is generally approved in cases of chorea. She had taken arsenic until it had produced the cutaneous eruption characteristic of its prolonged administration. The remedies prescribed by myself, as systemic tonics, were not, in my opinion, better than those which other physicians had exhibited. Indeed, I should have been glad to use arsenic, had it not already been taken to excess by the patient.

As further regards this case, I emphatically disclaim the merit of having cured chorea "through the eyes;" but, on the other hand, I am confident that *the chorea could not have been relieved while the ocular defect persisted* as a source of nervous irritation. I merely eliminated this etiological factor and then—pardon the expression—treated the chorea for what it was worth.

A time-honored aphorism pronounces comparisons odious; notwithstanding which, I venture to compare the treatment of this girl, without regard to the ocular complications, to an attempt to bail out a boat that is leaking. Rectification of the ocular defects represented the stoppage of a leak. As bailing fails while leaking persists, so treatment failed until the source of nervous irritation received attention.

The theory of convergence has been satisfactorily elaborated; but the means hitherto devised for the *treatment* of muscular insufficiencies leave much to be desired. This is the more astonishing since the matter has received, for more than thirty years past, the careful attention of those whose names are most prominent in the list of ophthalmic authorities. But progress in this direction is constant, and I make bold to predict that, during the next decade, the efficiency of our armamentarium with which to combat muscular insufficiencies will be more than doubled.

I shall not dwell upon the methods of treating such disorders. They are no secret, and, so far as my own knowledge of the matter is concerned, it is at the disposal of any of my colleagues whom I may be able to serve by its communication. A discussion of this special topic is to be found in the fifth chapter of my translation of Landolt's work on refraction and accommodation.

The list of therapeutic agents employable in cases of convergence anomalies at present embraces orthoptic training, the indi-

rect influence of spherical lenses, prismatic spectacles, stimulation by means of electricity, and operative measures. In view of the close relationship existing between accommodation and convergence, it may be proper to increase this list by the addition of mydriatics and myotics.

Before the International Congress, which sat at London, in 1881, Dr. Landolt, in discussing the treatment of the disorders in question, insisted upon the impropriety of confining one's self to any single method of procedure, and strongly advocated the combination, to the same end, of all the therapeutic methods applicable in such cases.¹

I am aware that some persons have seen fit to pooh-pooh orthoptic training as a legitimate method of treatment. With such I have no quarrel. Orthoptic training has a firm basis in physiological principles and the endorsement of such authorities as Landolt,² Bull,³ Carter,⁴ Noyes⁵ and Soelberg-Wells.⁶ It needs no apologist.

To explain the relationship between muscular insufficiencies and consequent neurotic conditions, we must bring "reflex irritation" into the discussion. My lamented friend, Dr. J. S. Mosher, was wont to characterize this as "the witches' broom, on which medical men mount and soar away in triumph when asked to explain what they do not themselves understand." The jocoseness of this characterization is hardly more evident than its justice. I doubt if any of us would care to take exception to it. But, granting that "reflex irritation" is only a *name*, it is no less true that it stands for a reality with which we are confronted every day in practice. Conjure it as we may, like Banquo's ghost it will not down. I have sought enlightenment concerning it from several of the most erudite of my colleagues, and have received the uniform response that, while that which we call reflex irritation is an entity, no satisfactorily precise definition of the term has yet been formulated. As it has no more exegetical importance for me than for physicians generally, my use of it in this connection is attended with no impropriety. The investigator in this department may study with profit the

¹ Archives d'Ophthalmologie, vol. I, p. 519.

² Landolt: Refraction and Accommodation, etc., p. 407.

³ Bull, in Soelberg-Wells, Diseases of the Eye, p. 723.

⁴ Carter, Diseases of the Eye, p. 566.

⁵ Noyes, Diseases of the Eye, p. 93.

⁶ Soelberg-Wells, Diseases of the Eye, p. 723.

pages devoted to theories of fatigue in Donders' classical treatise on accommodation and refraction.¹

In the light of experience with similar efforts, I can hardly hope that this paper will escape adverse criticism. But I would forestall a certain species of it by the assertion that I have *not* made a hobby of the subject herein discussed. Personal observation, in the clinics of New York, London, Paris and Berlin, leads me to the belief that the percentage of muscular asthenopes among my patients is not unusually great. The impression is confirmed by comparing this percentage with that reported by other investigators. It is, to be sure, greater than Von Graefe² had found, prior to 1862, or Mauthner, prior to 1866;³ but does not differ, in that respect, from the one reported by later writers. Muscular asthenopia is now better understood than it was a quarter of a century ago, and convergence anomalies are oftener sought.

While fully conscious that my presentation of the topic is very imperfect, I hope that this paper may have fulfilled its purpose, by arousing and renewing the interest of my colleagues in the subject of which it treats. In the firm conviction that the matter merits some attention from every practicing physician, I respectfully submit this slight contribution to the general fund of data concerning convergence anomalies.

DISCUSSION

followed, Drs. T. Featherstonhaugh, S. A. Russell and H. Bendell participating. Discussion was closed by Dr. Culver.⁴

THE BACTERIUM TERMO has little or no power to destroy the bacillus tuberculosis. The case of Broncho-Pulmonary Mycosis reported by William F. Waugh, M.D. (*Phila. Med. Times*, April 16), shows the need of expelling this germ, as well as others.

LUMINOUS PAPER.—With 100 parts of the pulp, 20 to 25 parts of phosphorescent powder (calcium sulphide) and a little gelatin are mixed.—*L'Union Pharmaceutique*.

¹ Donders, Accommodation and Refraction, p. 265, et seq.

² Von Graefe's Archiv der Augenheilkunde, viii., 2, p. 322.

³ Die Optischen Fehler des Fehler Auges, p. 384.

⁴ In the course of discussion, Dr. George T. Stevens' investigations, in this connection, were alluded to. As he failed to do so at that time, Dr. Culver avails himself of this opportunity to express his appreciation of the valuable contributions made by Dr. Stevens to our present knowledge of convergence anomalies.

ABSTRACTA.

CYSTOTOMY AND ALLIED OPERATIONS.—At the annual meeting of the American Surgical Association, Washington, D. C., May 11-14, 1887, Dr. F. S. Dennis, of New York, read a paper on "The Exploration of the Bladder by the Supra-Pubic Method."

Supra-pubic lithotomy is simple in technique, safe in execution, free from injury to the reproductive organs, radical in results, curative in application, and brilliant in statistics. The many serious accidents attending the lateral operation are avoided. For a few days before operation a milk diet should be employed. The day previous to operation the bowels should be moved with castor oil. The morning of the operation an enema should be used, so as to empty the rectum for the introduction of the rubber bag. The parts should be washed with antiseptic solution. After the patient has been etherized, the surgeon should introduce a rubber bag into the rectum so as to be above the internal sphincter. Into this, twelve ounces of warm water is to be introduced. This quantity will have to be increased or diminished according to circumstances. The danger of rupture of the rectum in elderly people and young boys should be borne in mind. The urine should be withdrawn and six ounces, more or less, of an antiseptic solution introduced into the bladder. The catheter may be left in the bladder and stopped with cork, and this will serve as a guide to cut upon. The distention of the rectum and bladder increases the distance from the pubes to the anterior cul-de-sac of the peritoneum to three inches. The incision should be made in the median line and extend for three or four inches above the pubes. When the transversalis fascia is reached, the use of retractors, on the principle of the eyespeculum, facilitates the operation. Having divided the fascia, the end of the catheter can be felt and cut upon as a guide. The bladder may then be seized with two tenacula and opened. Where free exploration is desired, sutures are introduced on each side of the incision. The stone is removed either with the fingers or forceps. The bladder may then be washed out. A catheter should be introduced through the urethra, but not be left longer than twenty-four hours, on account of the danger of exciting traumatic urethritis. In the majority of cases, the wound of the bladder should be left open. In cases of calculi, the condition of the tissues is such that primary union is unlikely. In certain other conditions, such as rupture, the wound may be closed. The abdominal opening is to be closed and a tube introduced.

This operation is indicated (1) for hard, large calculi, and in persons suffering with paraplegia and deformities rendering lateral lithotomy difficult; (2) for removal of certain foreign bodies,

such as hair-pins, etc., and for the treatment of chronic cystitis; (3) in cases of tight stricture, fibroma of prostate, tumors of the bladder, and for rupture. In its extraordinary simplicity, its reduced mortality, its freedom from danger, and safety for the general practitioner, it compares well with litholapaxy.

The speaker had collected one hundred and twenty-four cases of supra-pubic operation for stone done since 1879. Previous to this date the rate of mortality was thirty per cent. Since then the mortality has been reduced, there being eighteen deaths, a mortality of fourteen per cent. Seven of these deaths may be justly excluded, giving a mortality of nine per cent. According to Sir Henry Thompson's statistics, the death-rate from the lateral operation is twelve per cent. According to the same authority, the mortality of lithotripsy is six per cent. In considering the mortality of this operation, two facts are to be considered. The mortality may be improved by more rigid antiseptic precautions. The second fact is that the operation has been limited to the largest stones. When the smaller stones are included, the death-rate will be reduced.

Dr. John H. Packard, of Philadelphia, read a paper on "Supra-Pubic Cystotomy for Other Purposes than the Removal of Calculi," and cited cases.

His method of procedure is as follows: The bladder should never be more than moderately distended, not more than six or eight ounces of a boric-acid solution being employed. To retain the water in the bladder, a convenient method is to bend the urethra on itself and hold it in this position. There seems to be more advantage and less risk from distention of the rectum. Many writers recommend that the bladder be steadied by an assistant, but this was regarded as needless and objectionable.

The incision through the skin should be free enough to give ready access to the deeper parts. When the bladder is reached it is desirable to secure it in some manner before puncturing. For this purpose a small double hook may be used; a small tenaculum may answer. When a large opening is to be made a double ligature is, perhaps, the best device. In cases of retention the curved trocar and cannula may now be at once used; the cannula should afterward be substituted by the tube. The speaker's custom is to make the opening in the bladder just large enough for the tube. The proper point for making the opening seems to be about at the middle of the exposed portion of the wall of the bladder, which would be about one inch above the pubes.

The drainage tube should go well into the bladder and have lateral openings only near its extremity. The external end may be closed with a cork or clip, or by bending it. In old men with atonied bladders he had sometimes used glass tubes. If a large opening has been made in the bladder, it may be closed around the tube with a few catgut sutures.

Dr. A. Vander Veer, of Albany, N. Y., read a paper entitled "To what Extent can we Classify Vesical Calculi for Operation? with a Report of Cases and Remarks on the Different Methods Employed."

In explanation of his presenting a paper on this subject, he remarked that, while he did not come from a stone-bearing section, he had found from conversations with his associates that he had operated on rather more than the average number of cases in his vicinity. He briefly gave the detailed histories of forty-one cases which he had operated on. The various methods employed were lithotomy, rapid dilatation of the urethra, and Bigelow's operation (litholapaxy). The cases presented represented every variety of stone, as to location in the bladder, prostatic, membranous and spongy portions of the urethra. The kinds as to formation of hard and soft calculi was singularly complete, while the extremes as to size were remarkable.

After a review of the literature of the subject, he formulated the following conclusions: Can we yet classify our cases with certainty as to what is the best and most certain course to pursue for the safety of the patient's life and future comfort? In attempting to do this with his own cases, he said there were seven cases of perineal lithotomies, with two deaths and five recoveries, the former being very old men with large stones. Of attempted litholapaxies and an immediate perineal lithotomy there were two cases, both resulting in death, one occurring in the speaker's practice, the other in that of the late Dr. Snow. Both were severe cases of large stone, the patients presenting a history of much suffering through many years. Of dilatation of the urethra in the female, and washing out of fragments or removal of stone entire, there were six cases, all recovering, with no complication whatever. Of urethral calculi in the male there were four cases, all recovering. Of simple lithotritry in the male there was one case, followed by recovery.

Of attempted litholapaxies, but which were not completed, there were four cases, three ending in death and one, the stone hiding in a sac, later underwent perineal lithotomy and recovered. One was probably complicated with some form of tumor of the bladder, and a history of chronic disease of the kidneys. One was a case of chronic alcoholism, one was complicated with sacculated bladder, and the last two were cases of surgical kidney of the very gravest kind.

Of the litholapaxies in the male there were eighteen patients, having twenty-two operations, four requiring a second operation. Of the number, sixteen recovered and two died; of the latter, one after the first and one after the second operation.

With reference to supra-pubic lithotomy, the author said that, with the excellent results we are likely to obtain from rapid lithotritry, he did not believe that we should ever expect from it as great a per cent. of recoveries as from lithotritry. The

operation must necessarily deal with severe cases of large, and in some instances sacculated, stone. A table of reported cases of supra-pubic operations was given, showing in 142 adult cases a mortality of twenty-two per cent.; in children under fifteen years of age 113 cases gave a mortality of 10.5 per cent. We must remember the fallacy of all tables, since many cases never return to the first operator.

The operation of litholapaxy is certainly indicated where the stone is small or of moderate size, and, contrary to the teachings of a few years since, can be done in very young male children with proper instruments. In male adults, if there is severe chronic cystitis, no matter what is the size of the stone, the supra-pubic or some form of perineal lithotomy seems best. The cystitis can be successfully treated, and there is less danger of a re-formation. The speaker thought that it would be found by future statistics that cystitis has much to do with the necessity for a second or third operation. He thought that contracted bladder in the male, with adhesions, had not received the attention which it demanded. This must, in some instances, embarrass supra-pubic lithotomy. On anatomical grounds, the supra-pubic operation will be much simpler in the youth, as the bladder is much higher in the pelvis at this time of life. In girls, rapid dilatation or supra-pubic lithotomy will undoubtedly reach all cases. In adult women, vaginal lithotomy may be added.

He closed with a few remarks on the difficulty of securing a proper examination of the urine, such as would reveal the true condition of the kidneys. Casts are very generally absent; albumen can very often be traced to the presence of pus, and he expressed the conviction that we have much to learn from the surgical kidney.

The *Boston Medical and Surgical Journal*, May 19, 1887, in an editorial on this matter, says: "The third paper, by Dr. Vander Veer, deals with the classification of calculi with reference to choice of operation. The conclusions reached are, that litholapaxy should be applied to stones of moderate size, but discarded in favor of lithotomy where severe chronic cystitis coexists, no matter what the size of the stone. The author does not think that supra-pubic cystotomy will ever compete favorably with lithotripsy, on account of its greater mortality, but acknowledges that it is the best method with which to deal with very large calculi and with some cases of sacculated stone.

"The tendency to welcome with injudicious enthusiasm the resurrection of supra-pubic cystotomy, to make its application all but universal, to the detriment of litholapaxy, and we believe also to that of many patients, was becoming so marked in some quarters—especially in Germany, where at Magdeburg, Volkmann said that litholapaxy henceforth would possess only an historic interest, and Koenig and Kramer, at Berlin, though less sweeping in their judgment, seemed to share the same opinion—that

we have been glad to notice what seem to us the more just views which have been presented from time to time since these declarations. Guyon has undertaken the defence of lithotrity, in an article, in which after an exhaustive review of the supra-pubic operation, with its modern improvements, and of litholapaxy, his concluding sentence is this: 'I shall have attained my end, if I have contributed in common with others, in showing that rapid lithotrity deserves to retain the first place in the treatment of stone in the bladder, and that all surgeons should assist in maintaining it there.'

"Dr. Vander Veer has brought out the fact again that with the best showing the mortality statistics of supra-pubic lithotomy cannot be reduced to much below fifteen per cent., while those of litholapaxy vary from two per cent. to six per cent. Until this difference, therefore, is more equalized than at present, the burden of proof will continue to remain with the advocates of the supra-pubic operation, certainly so far as any thing like a universal application of it is concerned.

"With the main conclusions of Dr. Vander Veer's paper we are therefore quite in accord, and his statements seem well and carefully considered."

THE METRIC SYSTEM.—(From *New England Med. Monthly*.) Prof. Oldberg publishes in the *Pharmacist* a long and interesting article assigning grave reasons why the present—which he calls "Anglo-Saxon" system—should be preferred to the metric system.

A writer in the *Scientific American* gives his preference for the old system, and says: "I have gone, this summer, through the workshops of almost all the great countries on this side of the water, and have seen the practical use of the system that I have for so long a time condemned. I have frequently asked engineers if they liked the system, and I will give the answer of one in Berlin: 'We use it because we have to, and it is better to have some uniform system than the many measurements that formerly prevailed in the German States. We do not like the metric system, because it has too small a unit, and the metre is too large and involves the use of too many decimals. When we consider the interests involved, it will be seen that the population now making use of the English standard is greatly in excess of that using, by force, the French system. I am more confirmed in my opposition to the enforced adoption of the metric system in my country, and firmly believe that those countries that have adopted it are at a disadvantage (as compared with even the most imperfect of our systems).'"

To show the opinion of doctors and druggists of the United States, Dr. A. C. Matchett tells the *Medical Brief* that, a year since, he asked for an expression of approval or otherwise of the metric system of weights and measures from the medical profession and the druggists of the United States, and found seventeen

physicians and thirty-one druggists in favor of the system, and 3,641 physicians and 2,764 druggists opposed to it. The forty-eight wise men who wish for it have, however, made more noise than all the 6,405 who do not want it. Leaving aside all arguments, the majority, as it seems from the above statistics (and the majority always rule), say stick to the old system. Why try a system that was only made compulsory and used in a country that had such a multiplicity of measures, almost one to each province, that a general system had to be adopted in order to remedy the evil of varying local standards. Just as well to have adopted our system, for Sir John Herschel has pointed out that the polar axis of the earth is almost exactly 500,500,000 inches, and that the inch may therefore be considered quite as properly a national standard as the metre, and that the desirable correlation between volume and weight may be found in the fact that a cubic foot of distilled water weighs nearly a thousand ounces. By slight changes of the units this relation might be made exact, and the inch become equal to 1-500,000,000 part of the earth's polar axis; twenty-five of such inches making a cubic equal to the 1-10,000,000 part of the polar radius.—*Boston Medical and Surgical Journal*.

THE METRIC SYSTEM.—Some professors in our colleges discourse learnedly to their classes about the number of metres and grammes in some estimated distance to the sun, and weight of the heavenly bodies, and if one asks them for the terms in English, they only stammer and say, "Why, ah, ah, I have quite forgotten, let me see." They remind us of one of our countrymen who went to Paris for six months, and on his return to his native city went into a store to buy a pair of gloves, but he had become so used to think in French that he said to the clerk, "I want a pair of—ah, ah, what do you call them in English? *gants*, *gants*, in French." "Oh, yes," said the clerk, "I see, you want a pair of gloves."—*Charles Latimer, C.E., in The International Standard, Cleveland, Ohio, January, 1887.*

METRIC SYSTEM.—The *St. Louis Periscope*, speaking of Prof. R. A. Witthaus' "Laboratory Guide in Urinalysis and Toxicology," says: "If there be any—not to say demerit—but blemish to the hand-book, we should ascribe it to the metric scale. To the ordinary medical student, and certainly to the older professional man in our ranks (and we speak only of and to such), this constant necessity for the translation of the metres, etc., into the common vernacular of ounces, drams, etc., must of necessity be considerable of a hindrance."

AUSTIN FLINT AGAINST THE METRIC SYSTEM.—"I don't know any thing that has done me more good than to hear Austin Flint, while talking of teaching, inveigh, as I have done, against the metric system."—*Dr. E. R. Palmer, in The American Practitioner and News, Louisville, Ky., April 2, 1887.*

MARTINEAU'S TREATMENT OF DIABETES was adopted, at the instance of Dr. Rouget, some twelve years ago, and in seventy cases in which it has been employed since 1875, a cure of the disease has been obtained in sixty-seven, or nearly ninety-six per cent. The method is described by the author in a paper read by him at a meeting of the Société d'Hydrologie, and published in the *Annales Médico-Chirurgicales* for March, 1887. The patient is not obliged to modify his diet to any great extent, except that he is, of course, advised to abstain, as far as possible, from starchy foods, fruits and sugar. Instead of the ordinary beverages at meals he is to drink a solution of carbonate of lithia and arseniate of soda. A paper containing twenty centigrams (three grains) of carbonate of lithia and a tablespoonful of a solution of arseniate of soda, twenty centigrams to five hundred grams (three grains to the pint) of distilled water, are put into a syphon-bottle holding about a litre (two pints) of aerated water.

The patient uses this water as his only beverage, drinking it with his meals and at any other time when he is thirsty. At meal-time, however, it may be taken with wine, if the patient so desire. This is the whole treatment, and no other drugs are given, except for intercurrent troubles which may arise independent of the original malady.

This method, the author is led by his experience to believe, is efficacious only in those cases of diabetes occurring in individuals of a gouty or rheumatic diathesis. In the three cases in which no benefit was observed the patients presented no evidence of an arthritic tendency.—*Medical Record*.

RUPTURE OF LONG HEAD OF BICEPS.—Dr. Thomas G. Morton (Academy of Surgery): A man, while working in an excavation throwing dirt to the street above his head, suddenly felt something give way in his right arm, which at once became useless. Examination showed that there had been a rupture of the long head of the biceps. An incision was made over the body of the deltoid, and a second incision over the tumor formed by the contracted biceps. The tendon was then grasped with forceps and pushed beneath the intervening bridge of skin until it appeared in the upper incision. The fibres of the deltoid were next separated at as high a point as possible, and the tendon inserted and secured with cat-gut sutures. The wounds were then closed and treated in the ordinary antiseptic manner, and healed without complication. When presented to the Academy a few weeks after the accident, the patient had good use of the arm and could flex it with considerable force.—*Progress*.

A **FELON** should be opened midway between the artery and tendon. If necessary, it can be opened on both sides. If the sheath of the tendon is opened, the tendon will almost always slough, and the finger will be useless.—*John Ashhurst, Jr., in Polyclinic*.

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No. 5.

—THE MEDICAL MISSIONARY SOCIETY EAST has been incorporated and started on the good work of carrying the word of life to heathen people at the hands of well-educated medical men. A similar society has been for some years in existence at the West. The object of the society is to give thorough medical training and education to prospective foreign missionaries. It is well known that a physician soon gets to be immensely sought after among these people. They are known to carry the sick in their arms for many miles, waiting all day sometimes, and perhaps in vain, to get a word with the man of healing. With all the influence and authority that medical knowledge brings in countries where so little is known of it, it would seem strange that no more has been done in this direction by the missionary societies, for, in fact, comparatively little has been done. The object of this new society is to carry on this line of work, not independently of, but in behalf of, the respective church boards of foreign missions. It proposes to give, not a smattering of medicine, but a complete education to graduation. Work will also be done in building up hospitals and dispensaries abroad. Some of the men will go to hospitals, all will go to practice medicine, and, in addition, to preach as they have opportunity. Medical schools in Chicago, Minneapolis and New York take the students of this society gratuitously, and probably the Albany Medical College will also. Albany is made the head-quarters of the society, and its officers are mostly Albany men. Rev. P. S. McKillop, M.D., is the corresponding secretary and active agent of the society.

F. C. C.

BOOK NOTICES.

A TREATISE ON DISEASES OF THE SKIN. By T. McCall Anderson, M.D. 8vo, 650 pp. P. Blakiston, Son & Co., publishers.

It has always been an accepted fact that a foreigner could not describe the types of disease presented by a country so well as a native, because every country has types peculiar to itself. This fact has doubtless done a good deal to develop the medical literature of America. The need of it has seemed especially true of diseases of the skin; some varieties common in Europe are seldom seen here, and many show themselves under different form and call for different treatment.

A perusal of the work of the distinguished dermatologist and Professor of Clinical Medicine of the University of Glasgow raises the question, in this connection, as to whether this truism is not losing its force as to dermatology by reason of a cosmopolitan character that is coming to invest its literature. Our periodical literature abounds of recent years with the contributions not only of our more closely related English confreres, but not less with those of the continent, and of Germany especially. There is certainly a larger community of thought and study in this branch, perhaps in all branches, of medical literature. From no one would this be looked for more certainly than from McCall Anderson, who has already made his name a familiar one in our home literature, and whose work gives evidence of familiarity with skin diseases as they have come to be especially known to us. American dermatological literature has been very rich during the past decade, in which time the only English periodicals on this subject have been maintained elaborately, and the treatises of Duhring, Piffard, Bulkley and Robinson replaced those of Hebra and Wilson, and the only book on skin diseases that has had a reading is that of the lamented Tilbury Fox.

This book of Dr. Anderson's is in every way commendable. It has not given that attention to pathology that is the especially valuable feature of Robinson's work, but it has more of the practical material that we find in Bulkley's and Duhring's books. It was written with special reference to diagnosis and treatment. It contains a few colored plates, for which, however, not very much can be said. The analysis of 11,000 cases is of value as showing the relative frequency of diseases. Eczema composed

less than one-fourth of the number, which is comparatively less frequent than it is met with in this country, though there seems reason to believe that it is increasing with us. The descriptions of disease are exceedingly good, and the attention to diagnosis shows acute observation, the tabulated arrangement of distinctive features of diseases resembling each other being particularly valuable. There is no doubt but that this large and compendious treatise, the outcome of twenty-five years of study, will receive extended consideration from the profession of this country, to whom it is presented by the American publishers. F. C. C.

A TEXT-BOOK OF PATHOLOGICAL ANATOMY AND PATHOGENESIS. By Ernst Ziegler. Translated and edited for English students by Donald Macalister, M.A., M.D. Three parts complete in one volume. Octavo, 1,118 pages, 289 illustrations. Price, extra muslin, \$6.50. New York: William Wood & Company.

Publishers and possessors both may well be proud of this work. The present volume contains about 350 pages more than the edition of 1884, and includes in the new part the pathology of the urinary organs, the respiratory organs, the central nervous system and the peripheral nervous system. The pathological anatomy of the eye, ear, bones, muscles and genital organs—generally described as surgical pathology—is issued in German in a separate volume in addition to what is here translated and revised. This present volume of over 1,100 large octavo pages is in clear print and profusely illustrated. An index of authors and a very full index of topics add greatly to the working value of the volume.

Every medical student will want this edition, which is unsurpassed on its subject in the English language, and is *complete to date*.

DRUG ERUPTIONS: A Clinical Study of the Irritant Effects of Drugs upon the Skin. By Prince A. Morrow, A.M., M.D., Clinical Professor of Venereal Diseases; Consulting Surgeon to the Bellevue Out-door Department, etc., etc. Octavo, 206 pages, one lithographed plate. Extra muslin. Price, \$1.75. New York: William Wood & Company.

A part of the contents of this book has appeared in the *Journal of Cutaneous and Venereal Diseases*, of which the author is editor. It is very well known to the profession that abnormal consequences are liable to follow the exhibition internally of some drugs to some persons, and that this abnormality depends

much upon individual idiosyncrasy. This common knowledge has not extended, though, much beyond the papules or pustules which often attend the taking of the iodides and bromides.

Those not familiar with the literature of this subject will be surprised to learn that the author has collected about sixty drugs which exert a pathological effect upon the skin, including in the number those which act topically and where local action is well known, as croton oil, mustard, tartarized antimony, and the like. The bibliographical research necessary to exhaust the subject must have been very considerable, fifteen of the two hundred pages being taken up with these references. Dr. Morrow has done a good service by collecting in one volume the literature of this not unimportant subject. As he well says by way of preface, the physician should be familiar with the effects of every drug he employs, not only its normal effects, but those which are incidental.

F. C. C.

ATHOTHIS: A Satire on Modern Medicine. By Thomas C. Minor. Robert Clarke & Co., publishers.

Dr. Paulus Androcydes, a modern, dabbles in matters ancient until he finds that his pet cat is the present habitation, in the process of transmigration, of the soul of an Egyptian mummy several thousand years old which he has chanced to come into possession of. He has the audacity to carry out the formula which he finds with the mummy, cremating the cat and restoring the soul to its original desiccated, but well well preserved, body. Athothis, by this kindly deed rehabilitated, returns the favor by relieving the doctor of the incubus of his own mortal frame, and in spiritual state they take an excursion among the doctors and apothecary shops, he making his end of the inevitable discussion weighty with the wisdom picked up through the centuries, having as a pet crane absorbed all there was in the Alexandrian library, and even in his recent feline condition having sucked Dr. Androcydes' library dry; he could speak patronizingly of Solomon. As might be anticipated, the ancient dynasties have the best of the argument. One regrets that the time of two such exalted individuals is often taken to impale some unworthy representatives of medicine with the finger of scorn, and also that while in their ghostly state they were enabled to look through the bodies of the patients as if they were transparent, while the consulting physicians clothed in common clay

struggled clumsily over the diagnosis, they did not seize the chance to make some valuable contribution to physiology and pathology; and while they were growling at Dr. Slasher for doing a tracheotomy instead of giving an emetic, why could they not have seen O'Dwyer through the very thin veil of his future. But that would be asking a man to ride his fancy at too galloping a gait, to be sure. While one might criticise the growling spirit which these spiritual beings indulged in towards the poor mortals of to-day, and feel disposed to stand up for the people of this end of time, as it were, still there is room to learn much of the knowledge of ancient times, aside from its contrasts with that of the present, though with what faithfulness it is presented by the author through the mouths of these critics—this critic is not fully prepared to say. F. C. C.

MATERNITY, INFANCY AND CHILDHOOD: Hygiene of Pregnancy, Nursing and care of Infants and Children in Health and Disease. By John M. Keating, M.D., visiting obstetrician and lecturer on diseases of women and children, Philadelphia Hospital (Blockley), etc. 221 pp., indexed, 12mo, cloth, \$1.00. J. B. Lippincott Co., Philadelphia. London: 10 Henrietta street, Covent Garden. 1887.

Adapted especially to the use of mothers, or those intrusted with the bringing up of infants and children, and to training schools for nurses, as an aid in teaching the nursing of women and children.

This is one of the Lippincott Company's series of books entitled "Practical Lessons in Nursing."

EVACUANT MEDICATION (CATHARTICS AND EMETICS). Henry M. Field, M.D., Professor of Therapeutics, Dartmouth Medical College; Corporate Member Gynecological Society of Boston; Non-resident Member New York Academy of medicine, etc. 208 pp., 12mo, cloth, \$1.75. Published by P. Blakiston, Son & Co., Philadelphia. 1887.

The material has been gathered from clinical observation, as well as from a digest of French, English and American journals and standard works.

"A special purpose has been to provide a practical study of the individual action, application and contra-indications of the more prominent cathartic agencies; a work which cannot well be undertaken in connection with a general treatise on *Therapeutics and Materia Medica* for want of space, and which will

not, unless the author mistakes, be found in any other treatise, either in English or the other languages commonly familiar. Passing by other features of the book, attention may also be directed to the discussion of *Cathartic* and *Emetic Medication*, and especially to the treatment of *Super-vomition*, or continuous morbid vomiting."

WYTHE'S POCKET DOSE BOOK, containing "Hints on Prescription Writing," "Hints on Treatment," "Table of Symptoms," and other valuable matter. By J. H. Wythe, M.D., Professor of Histology and Microscopy, Cooper Medical College, San Francisco. Seventeenth edition, rewritten, 226 pp., 24mo. P. Blakiston, Son & Co., Philadelphia, publishers.

For more than a quarter of a century this book has had a steady sale, notwithstanding imitations and analogous publications.

PERSONALS.

—Dr. Ira Harris ('81), of Tripoli, Syria, has, in company with Rev. W. K. Eddy, investigated some remarkable sarcophagi recently found in a cave near Sidon. Competent authority says that there is nothing equal to this find in the collection at Athens, and very little in sculpture that is finer in any museum. "A Remarkable 'Find,'" in *The Independent* (New York), April 21, is a detailed account.

—Dr. James F. Barker ('77), of Albany, was married May 2, 1887, by Rev. D. C. McNair, to Miss May E. Evans.

—Dr. F. E. Schley ('81) has been taking a view of European medical methods during a tour of three or four months in England, France, Germany, Italy, etc., and has been spending a few days with friends in Albany since his return, but has now settled down to hard work again in the Catskills, at Pine Hill, Ulster county, N. Y., where he will be glad to look after any patient of ours whom we may send to that delightful health resort.

—Dr. Jacob Falk ('83) is at present with Dr. Herman Knapp, of New York, and is assistant at his eye and ear Hospital. Dr. F. returned about a year ago from Europe, where he took an extended course in his specialty, studying with some of the most eminent professors, such as Michel, of Wurzburg, Von Arlt, of Vienna, and Hirschberg, of Berlin. He was a regular clinical assistant to the latter, a distinction seldom enjoyed by foreigners.

—Dr. George E. Whipple ('83), of Olmsteadville, Essex county, N. Y., married Miss Ella Havens, daughter of Morton Havens, 25 Jay street, Albany, April 13, 1887.

—E. F. Hunting, Ph.G. (Albany College of Pharmacy, '87), who took the \$25 prize for the greatest proficiency in all the branches at the commencement exercises in March, 1887, has opened a pharmacy at No. 37 Central avenue, Albany, above Knox street.

—Dr. Charles M. Culver ('81), of Albany, was married at 11:30 A. M., Wednesday, May 10, 1887, to Miss Jessie Munsell, by Rev. George W. Miller, in the first Lutheran Church, Albany.

—Dr. John D. Hall ('58) died at Corazal, British Honduras, last fall.

—Theo. J. Lewi, Ph.G. (Albany College of Pharmacy, '83), son of Dr. Jos. Lewi, has opened a drug store at No. 75 Eagle street, corner of Hudson avenue, Albany. Mr. Lewi's training under Louis Sautter will add to the public confidence in this new druggist.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY— OFFICERS AND MEMBERS.

Annual meeting, second Tuesday in October. Semi-annual meeting, second Tuesday in May. Stated meetings are held Wednesday evenings, at Alumni Hall, Albany Medical College, at least once each month, from October to May.

OFFICERS.—Lorenzo Hale, president; S. R. Morrow, vice-president; D. Fleischan, secretary; S. A. Russell, treasurer.

CENSORS.—B. U. Steenberg, O. D. Ball, C. E. Witbeck, James P. Boyd, James C. Healey.

DELEGATES TO STATE MEDICAL SOCIETY.—Herman Bendell, James P. Boyd, D. H. Cook, C. S. Merrill.

DELEGATES TO UNION MEDICAL ASSOCIATION.—C. M. Culver, W. J. Nellis.

Archambeault J. L. 56 Congress, Cohoes, 8-9, 1-3, 7-9
 Babcock Robert, 99 Eagle, 8-9, 1-3, 7-8
 Bailey Theodore P. 95 Eagle, 9-10, 3-4, 7-8
 Bailey William H. 1 Washington av. 8-9, 3-4, 8-9
 Balch Lewis, 14 Washington av. 8½-9½, 2-3½, 7-8
 Ball O. D. 69½ Broadway, 8-9, 1-3, 6-8
 Barker James F. 48 Clinton av. 9-10, 2-3, 6-8
 Bartlett E. A. 20 South Hawk, 8-9, 1-3, 6-7
 Becker Hiram, New Salem, 8-9, 1-2, 7-9
 Beck Thomas, 276 Washington av. 7-9, 1-3, 6-10

Bell H. W. 38½ Broadway, E. Albany, 8-10, 1-2, 6-8
 Bendell Herman, 178 State, 9-4
 Bigelow J. M. 3 Lancaster, 8½-9½, 2-4, 7-9
 Blair L. E. 46 Eagle, 8-9, 2-3, 6-8
 Boudrias L. 105 Mohawk, Cohoes, 8-10, 1-3, 7-9
 Boulware J. R. 17½ Hamilton, c. Eagle, 8-9, 2-3, 7-8
 Boyd James P. 212 State, 8½-9½, 1½-3½, 7-8
 Britton Orson, 164 Elm.
 Brown Edward E. 91½ Hudson av.
 Brown R. J. 648 Central av.
 Case Daniel C. Slingerlands, 8-9, 6-9

Case H. S. 101 Madison av. 8-10, 2-3, 6-8
 Clark R. D. 65 Grand, 8-9, 12-2, 6-8
 Classen F. L. 66 Grand 9-10, 2-3, 7-8
 Cook D. H. 264 Clinton av. 8-9, 1½-3, 6-8
 Cooper John L. 705 Broadway, 8-9, 12-2, 6-8
 Craig William H. 12 Ten Broeck, 8-9, 2½-3, 7-8
 Craig Joseph D. 12 Ten Broeck, 9-10, 2-3, 7-8
 Crawford C. H. 226 Hudson av. 8-10, 2-4, 7-8
 Crounse Hiram, Clarksville, 9 A.M., 4 P.M.
 Crounse Jesse, Knowersville, 8-9, 7-9
 Culver C. M. 36 Eagle, 9-12, 2-4
 Curtis F. C. 17 Washington av. 8-9, 2-3, 7-8
 Davidson J. R. South Bethlehem, 8-9, 1-2, 6-7
 DeGraff A. Guilderland, 8-9, 1-2, 6-7
 Devol C. 48 Franklin, 8-9, 12-2, 8-9
 DuBois Mary, 102 Hamilton, 11-2, 7-8
 Dwyer M. J. 103 Eagle
 Elmendorf G. E. Alcove, Albany co.
 Featherstonhaugh, J. D. 3 Summit, Cohoes, 2-3, 7-8
 Featherstonhaugh T. 36 Eagle, 9-4
 Fennely P. E. 97 Broadway, West Troy, 10-12, 4-5
 Fisk Frank H. 76 Hudson av. 8-9½, 1-3, 7-9
 Fleischman D. 134 Hudson av. 8-10, 2-3½, 7-8
 Fowler Amos, 29 Second, 8-9, 1-3, 7-9
 Fredenburgh B. B. Spraker's Basin, Montg. co.
 Freeman S. H. 77 Columbia, c. Chapel, 8-9, 1-2, 6-7
 Graveline L. C. B. 119 Green, 8-9, 1-3, 7-9
 Greene F. R. 606 Central av. 8-9, 1-3, 7-9
 Hailes William Jr. 197 Hamilton, before 9, 1-2, 6-7½
 Haines Edwin, South Westerlo
 Hale Lorenzo, 194 Clinton av. 8-9, 2-3, 6-7
 Hallenbeck E. C. Bethlehem Centre
 Haskell J. M. Second, Bath, 8-9, 12-2, 7-9
 Haynes J. U. 76 Remsen, Cohoes, 8-9, 12-2
 Healey James C. 46 Rensselaer, 8-9, 1-3, 6-8
 Helme Thomas, McKownville, 8-10, 7-8
 Hennessy John V. 872 Broadway, 7-9, 1-3, 6-8
 Holding, G. H. West Troy.
 Houston D. W. Cohoes, 1-3, 7-9
 Huested Alfred B. State, c. Eagle
 Hull H. V. 56 Jay, Schenectady, 8-9, 2-3, 7-8
 Hun Henry, 33 Elk, 8-9½, 2-3, 7-8
 Hun Thomas, 33 Elk
 Keegan, P. J. 139 North Pearl, 8-9, 1-3, 6-8
 Kilbourne Albert W. 792 Broadway, 8-9, 2-3, 7-9
 La Moure U. B. 90 Hudson av. 8-9, 2-3, 7-9
 Lewi Joseph, 94 Westerlo, 8-9, 2-3, 6-8
 Lewi Maurice J. 66 Eagle, c. Jay, 9-10, 2-3, 7-8
 Lyon George E. 494 Croton, West Troy, 8-10, 5-7
 Marselius W. C. 28 Eagle, 8-9, 2-3, 7-8
 Marsh Albert, 197 Lancaster, 8-10, 1-3, 7-8
 McAllister John D. Rose, n. Madison av. 8-9, 12-3, 6-8
 McHarg M. Dunnsville, Albany co. 8-10, 1-3, 7-8
 McNaughton Henry G. 3 South Hawk, 7-11, 3-7
 Mereness H. E. 712 Broadway, 1-3, 6-8
 Merrill C. S. 23 Washington av. 12-4, 6-7
 Miller Howard, 85 Jefferson, 9-10, 2-3, 7-8
 Mitchell J. H. 140 Main, Cohoes, 1-3, 7-9
 Monroe Nelson, Swan, c. George, Green Island, 7-9, 1-3, 7-8
 Morrill F. D. 74 Westerlo, 8-9, 1-3, 6-8
 Morrow Samuel R. 29 South Hawk, 8-9, 2-3, 6-8
 Mosher C. D. 351 South Pearl, 2-4 P. M.
 Mosher Frank G. Coeymans, 8-10, 7-8

Munson George S. 138 State, 9-4
 Murphy P. M. 66 Jay
 Murray William H. 269 Lark, 8-9, 1-3, 6-7½
 Nellis T. W. 44 Eagle, 8½-10, 1-3, 6-8
 Nellis W. J. 44 Eagle, 8½-10, 1-3, 6-8
 Newcomb, G. H. 94 Chestnut, 9-10, 1-2, 6-8
 O'Leary, D. V. 69 South Ferry, 8-9, 1-3, 6-8
 Paine H. S. 105 State, 8-10, 6-8
 Papen G. W. 89 Schuyler, 8-9, 2-3, 8-9
 Peltier G. Upton, Cohoes, till 9, 12-2, 5-8
 Perry T. K. 174 Second, 8½-9½, 2-3, 6-8
 Peters Samuel, 21 Seneca, Cohoes, 8-9, 1-2, 6-8
 Porter Charles H. 55 Eagle, 8-9, 2-3, 7-8
 Purple W. L. 46 Second, 9-10, 12-2, 6-8
 Reynolds W. H. T. 70 South Hawk, 8-9, 1-3, 7-8
 Ritzman Otto, 66 Willet, 8-9, 1-3, 6-8
 Ross J. W. Cohoes
 Russell, Selwyn A. 23 Lancaster, 9-10, 2-3, 6-7
 Sabin, R. H. 245 Broadway, West Troy, 7-8½, 12-2, 6-7
 Sabin William B. 245 Broadway, West Troy, 7-8½, 1-2, 6-7
 Scattergood, C. F. 10 Bleecker place
 Schutter Wm. L. 28 N. Knox, 8-9, 2-3, 6-8
 Seger, C. E. Callanan's Corners, 8-9, 1-2, 6-7
 Shanks, S. G. 547 Clinton av. 8-10, 1-3, 7-8
 Shattuck Joseph W. M. 194 North Pearl
 Shiland J. C. 251 Broadway, West Troy, 8-9, 2-3, 6-8
 Skillicorn J. H. 324 Hudson av. 8-9, 1-3, 6-7½
 Smith Charles H. 246 Washington av. 8-10, 1-3, 5-7
 Southworth Julius B. 47 Eagle, 11-3
 Starkweather R. H. 234 Central av. 8-9, 2-3, 7
 Steenberg, B. U. 1 Ten Broeck, 8-9, 2-3, 6½-8
 Steenberg H. W. 24 George, Gr'n Is'd, 7-9, 1-3, 6-8
 Stillman W. O. 287 State, 8-9½, 1½-3, 6-7½
 Stonehouse Jno. Ben. Albany County Penitentiary
 Swinburne John, 57 Eagle, 9-10, 2-4
 Ten Eyck A. P. Defreestville, Rens. co. 7-9, 1-3, 6-8
 Thompson John, 5 Canal, 8-9½, 1-2½, 6-8
 Townsend Franklin Jr. 188 State, 8½-9½, 2-3, 7-8
 Trego, T. M. 5 Ten Broeck, 8½-9½, 2½-3½, 7-9
 Tucker Willis G. College Building, 2-6 P.M.
 Ullman G. L. 70 Central av. 8-9, 2-3, 6-7
 Van Allen T. F. C. 47 Eagle, 1-4
 Vander Veer Albert, 28 Eagle, 8-9, 2-3
 Van Slyke E. 320 South Pearl, 8-9, 2-3, 6½-8
 Van Vranken, A. T. 31 Union, West Troy, 8-10, 1-3, 6-8
 Ward S. B. 135 North Pearl, 9-10, 2-3, 6-7
 Weidman Felix, Westerlo, 6-10, 6-9
 Willard T. H. Albany Post-office
 Winne L. B. 72 Livingston av. 8-10, 1½-3, 6-8
 Witbeck C. E. 20 Seneca, Cohoes, 8-9, 1-3, 7-9
 Woodward Harriet A. 6 Kenmore place, 8-9, 2-5, 6-7

Died during the Year:

J. W. Moore, Cohoes, d. Sept. 9, 1886
 John E. Hall, Cohoes, d. Nov. 3, 1886
 John J. White, Albany, d. January 24, 1887

Removed:

Sands J. H. E. 701 Fourth av. Brooklyn
 Merrington Frank J. Defreestville, Rens. co.
 Quackenbos F. S. 75 Sigourney st. Hartford, Conn.

ALBANY MEDICAL ANNALS:

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JUNE, 1887.

No. 6.

TOBACCO AMBLYOPIA.¹

BY HERMAN BENDELL, M.D., ALBANY.

(ALBANY MEDICAL COLLEGE, 1882.)

The toxic influence of tobacco in producing amblyopia is not generally accepted as a positive theory. Eminent authorities are divided in opinion on this subject, and the question as to the development of amblyopia strictly due to the abuse of tobacco remains undetermined. It is admitted that the conjoint abuse of tobacco and alcoholic stimulants produces toxic amblyopia, but, under the circumstances, it is difficult to name the predominant factor in the development of the disease. Judging from the history and symptoms of cases that have come under my observation, coupled with statistics of cases by reliable authors, I am of the opinion that tobacco amblyopia is of more frequent occurrence than is generally believed; and, granting that the treatment of this form of amblyopia does not materially differ from that generally practiced for the cure of toxic amblyopias, it is at least admissible that clinically it should receive separate consideration. That the excessive use of tobacco has a depressing influence upon the system is an admitted fact, and why its influences may not produce intraocular disease traceable to an overindulgence in its use, independent of other agents, is a debatable question. It is claimed by those who have given this

¹ Read before the Medical Society of the State of New York, February, 1887.

subject much attention that the abuse of tobacco gives rise to a peculiar and distinctive form of amblyopia, determined with the ophthalmoscope, by a loss of vascular supply to the optic nerve, a slight diminution of the vessels supplying the retina, and a congested appearance of the nerve itself; that the primary stage of the disease, usually very transitory, is of a hyperæmic character, followed by pallor of the temporal half of the optic disc, and that this condition, if not arrested by treatment, will, in many cases, lead to absolute blindness. As the disease progresses the toxic influence of tobacco becomes more marked; the disturbance of vision, which in the beginning of the amblyopia is apparently functional in its character, becomes more pronounced and more permanent, the activity of the pupil is diminished, the visual field begins to contract, the faculty of color perception becomes uncertain, and the optic disc shows traces of atrophic degeneration. Oftentimes the disease, after reaching a certain period, remains stationary. The lesion is principally confined to the optic nerve, and even after complete atrophy of the nerve the retina and choroid remain comparatively free from any recognizable changes. Both eyes are usually involved, and the disease is not generally marked by any pronounced constitutional disturbances. No positive theory has been advanced to substantiate the conclusion that an overindulgence in the use of tobacco will not produce functional and structural changes in the optic nerve and retina, due to an absorption of the poisonous elements of the weed. The large consumption of tobacco, and the rarity of cases of amblyopia resulting from its use, may have prompted the belief that its influence, independent of other agents, will not produce toxic amblyopia. It is but fair to presume that a large majority of consumers set a bound to their indulgence in the weed, and as a result of this precaution amblyopia resulting from the toxic influence of tobacco is not of as frequent occurrence as the amblyopias resulting from alcoholic and other poisons. Even a moderate use of tobacco oftentimes produces functional disturbances of the different organs of the body, characteristic of its toxic influences. The bloated and florid appearance of the victim of amblyopia potatorum presents a striking contrast to the emaciated and sallow face of the individual poisoned by tobacco. The former hesitates to admit the cause that compels him to seek relief; the latter is anxious to assist the physician in his diagnosis by an honest admission of

his exhaustive habit. Aside from the use of tobacco, many consumers of the weed are strictly temperate in the use of alcoholic stimulants; this is not so with those addicted to the habit of excessive indulgence in drink. We rarely meet a drinker who does not smoke, but frequently a smoker who does not drink. Mr. Jonathan Hutchinson, who has largely contributed to the literature of tobacco amblyopia, claims that when tobacco causes blindness it does so in virtue of an idiosyncrasy. That the physiological action of tobacco is not alike in all individuals addicted to its use is substantiated by those who have acquired the habit. On the other hand, many persons possess the faculty of educating themselves to habit, notwithstanding the fact that they are endowed with an individual characteristic antagonistic to the habit acquired; and this is especially applicable to the habit of using tobacco. In such persons there may exist an idiosyncrasy predisposing to the poisonous influence of tobacco. There are, in fact, many persons who can never learn to smoke or chew tobacco, for every attempt to indulge produces disturbances and discomfort of mind and body, not unlikely due to a peculiar nervous susceptibility awakened by its use. We must also take into consideration that the cumulative effect of tobacco, owing to a want of exercise and elimination, will more readily become pronounced in persons of in-door and sedentary occupation than in those persons who pursue their vocation in the open air. Again, the toxic influence of tobacco is largely governed by the quantity and quality consumed and the amount of poisonous products liberated by combustion. In the manufacture of the finer brands of smoking tobaccos and in the cultivation and preparation of the leaf for the manufacture of the better brands of cigars, great ingenuity is exercised to obtain free and thorough combustion of the weed; for the more active the combustion, the smaller is the quantity of carbonic gases and ammonia liberated, and to these chemical substances largely the toxic influence of tobacco on the system can be traced. These facts will account for the observation that a majority of those suffering from tobacco amblyopia are consumers of strong and inferior brands of tobacco.

The prognosis is generally favorable, provided the symptoms have existed for a short time and the impairment of vision is due to functional disturbances only; but if symptoms of atrophic degeneration in the optic nerve are manifest, the chances of a

cure, with complete restoration of vision, become extremely doubtful. As a rule we do not see these cases until the acuteness of vision is materially reduced, and the changes revealed by the ophthalmoscope in the advanced stages of this form of amblyopia are usually so marked as to admit of no encouragement to the patient. From the appearance of the optic nerve, together with the history and observation of the case, we are enabled to judge whether the condition is progressive or stationary in its character. If the disease is not of a progressive nature and the patient entirely abandons the use of tobacco, we are justified in the belief that total blindness will not supervene.

The treatment of this form of amblyopia will largely depend upon the extent and duration of the disease. A total abstinence from the use of tobacco is imperatively necessary in all cases, and should be insisted upon. It is a task of great difficulty for those addicted to the abuse of tobacco to reconcile themselves to this demand, for it is a hard struggle to abandon a habit that has become a luxury, if not a necessity. The patient will plead to be allowed to smoke so many cigars or pipes of tobacco daily, with the promise that he will gradually abandon the habit entirely. As in amblyopia potatorum the golden rule of treatment should be total abstinence forever, so in tobacco amblyopia there must be no concession, aside from a total abstinence from the use of the weed in any form allowed to the patient. The use of strychnine internally and by hypodermic injection has, in my experience, resulted beneficially. In the primary stage of the disease, and in those cases where the intraocular disturbances are of a functional character only, the injection of one-sixtieth to one-thirtieth of a grain daily, together with the use of nervines internally, will generally result in a permanent cure. In the advanced stages of this form of amblyopia the progress of the disease may be governed by treatment, but in those cases where the habit of overindulgence is not abandoned, complete atrophy of the optic nerve is slowly but surely developed. The beneficial influence of treatment will largely govern the determination of the will power in the abandonment of the habit. Persons suffering from tobacco amblyopia, especially in the advanced stages of the disease, rarely derive any benefit from treatment; they become discouraged, and continue to smoke regardless of consequences. There is no controlling influence, the victim practically resigns himself to his fate, and any prescribed method of treatment is useless.

It is needless to review in detail the history, symptoms and result of cases from which I have gained my experience. They constitute a class of patients from the records of private and dispensary practice in which I have had every opportunity to trace the family history, peculiarities and habits of my patients, watch the progress of the disease, observe the effects of treatment and the influence of a continuance or abandonment of the habit. In seven cases, especially, which have come under my care, the history and symptoms were so typical as to leave no reasonable doubt that an overindulgence in the use of tobacco was the cause of the amblyopia. Three of these cases were marked by a strict and life-long abstinence from alcoholic or malt stimulants, and the habits of life, aside from an overindulgence in the use of tobacco, were not of an exhaustive nature. The patients belonged to the better class of society, and attributed their ocular disability at the time they applied for treatment to the influence of an excessive use of tobacco. In two of these cases, under the influence of treatment and abandonment of the habit, vision was restored to its normal acuteness. In the remaining cases the impression of treatment was neutralized by a continuance of the excessive habit, and the amblyopia, originally of a functional character, gradually developed into organic lesion, with more or less permanent loss of vision. In many cases of this form of amblyopia, bodily vigor is apparently undisturbed, but in such persons who are not physically robust, symptoms of nervous irritation are especially pronounced. In fact, the functional disturbances of vision in the early stages of the disease are apparently governed, to an extent, by the quantity and quality of tobacco consumed and the physical condition of the patient. In one case under treatment the quality of tobacco indulged in was that commonly known as "navy plug," a strong, juicy and generally inferior article. The use of this was abandoned by the patient and a granulated tobacco substituted. The patient positively believed that the use of the weaker and better quality of tobacco greatly improved his vision, but it did not satisfy his appetite; he again smoked and chewed the "plug," has become nearly totally blind and physically a wreck. It was probably from such a class of patients that the learned Dr. Mackenzie was prompted to remark that "there are persons who would rather smoke than see." The toxic influence of tobacco in its action on the system is of an

insidious and chronic nature, developed principally by the habit of an overindulgence in smoking. It is by the process of combustion that the various chemical bases of the weed are liberated, and its poisonous effects are produced by inhalation. Its primary toxic impressions have been traced from the circulation to the brain and nervous system, and the peculiar form of amblyopia developed by its use is doubtless a secondary effect of its toxic action on the body generally. We are unable to state with certainty the time required for the development of the poisonous impressions, nor can we plausibly explain why one individual should be more susceptible to its toxic effects than another. Many consumers of tobacco speedily pay the penalty of an overindulgence in its use, while others tolerate its poisonous influences until warned by muscular tremor and threatening blindness that they are compelled either to abandon the habit or accept the punishment of its continuance.

AN UNUSUAL CASE OF FRACTURE AT BASE OF SKULL.¹

BY LOUIS E. BLAIR, M.D., ALBANY.

(ALBANY MEDICAL COLLEGE, 1881.)

Sydney L., a boy sixteen years of age, while coasting on Madison avenue on the evening of December 21, met with an accident. The bob on which he was riding collided with an iron post, upsetting the sleigh and pitching him forward on his head with great force. He received an injury in the right temporal region. He was picked up unconscious, and after fifteen minutes or so partially recovered his senses. He was confused, very dizzy, vomited considerably, and could not stand up. After waiting an hour he was assisted by two companions to his home on North Swan street, near Livingston avenue. He walked with them the entire distance—more than one mile. That night he suffered intensely with deep-seated headache, and vomited quite freely. Next morning, however, he declared himself as feeling better, and got up and dressed, and in the afternoon he went out coasting again. He continued to be about as usual for

¹ Read before the Medical Society of the County of Albany, Wednesday evening, March 23, 1887.

the next *eleven days*, and complained only of headache and dizziness occasionally. Saturday evening, January 1, about eight o'clock, the headache grew worse, and he could not remain up. He cried nearly all night on account of the pain, and seemed to rave; his folks could not keep him in bed, and he rolled on the floor, enduring the greatest suffering and agony until five o'clock in the morning, when he began to bleed from both ears. The bleeding was quite profuse, staining very extensively the pillow on which his head was resting. After the bleeding set in, the severe pain in the head abated. I was called to see him at eleven o'clock in the morning, it being the twelfth day since the accident. There was some oozing of blood from the ears. He complained of deep-seated headache, which he had difficulty in locating exactly, and there was pain on deep and firm pressure over the mastoid processes of the petrous bones. He also spoke of an indefinite pain deep in the neck, and said he sometimes felt it as though it were back of the mouth. He also pointed to a place which pained him very much—a spot which corresponded to the internal occipital protuberance. His breathing was somewhat rapid and labored. On listening to his heart, I found that its rhythm was very much disturbed, intermitting at times and then again beating very rapidly. His hearing was impaired, and he was quite deaf for a few weeks afterwards. He could not hear a watch tick when it was pressed close to the head. This was the same on both sides. The bleeding and oozing continued for three days, when it was followed by the usual watery discharge which is incident to this class of injuries. This watery discharge lasted for ten days and then ceased. With this, an improvement in hearing became noticeable. His appetite was abnormally increased; he was constantly craving food. This prodigious hunger continued for three weeks. His memory was very much disturbed, and he had great difficulty in endeavoring to concentrate his thoughts on any one topic for any length of time. He forgot the faces of some of his playmates, and when they visited him he did not seem to know them until his attention was directed to it. This head weakness has improved, but still his mind is very much impaired. He went back to school a few days ago, but found it impossible to learn his lessons, which were quite simple, and had to give it up. He was kept at home for six weeks after the bleeding showed itself. The treatment consisted of rest in the recumbent position, a light nourishing

diet and large doses of iodide and bromide of potassium. He took ninety grains of the iodide daily for three weeks without suffering any discomfort from the drug.

I was desirous of knowing to what extent the drum membranes were injured and what evidence there still existed of the injuries he received ten weeks before, and I asked Dr. Bendell to make a careful examination of his ears. He reported as follows: "I find a perforation in the lower quadrant of the left ear, and a cicatrix evidently the result of a perforation of the right drum membrane. The drum membrane of both ears is opaque and on the right ear hypertrophied. Both ears show symptoms of chronic otitis media. The hearing of both sides is reduced to 14-60, and the sounds of a tuning fork by bone conduction are heard loudest in the left ear, which indicates a more pronounced lesion on this side. Judging from the history of the case, it is safe to say that the condition of ears is due to the injury.

Holmes, in his surgery, says of watery discharges in connection with severe injuries of the head: "Anatomy, dissections of morbid specimens, experiments on the dead subject, all led to the conclusion that the watery discharge from the ear after a severe injury of the head is due to the escape of cerebro-spinal fluid. And where this fluid from the ear is plentiful and of a decidedly watery character immediately after the accident, there need be no doubt as to the nature of the injury—the watery discharge is due to the escape of the cerebro-spinal fluid, which can only take place through a fracture of the petrous bone implicating the internal auditory canal and its membranes."

Keetley says that "the most fractures of the base of the skull are at the place where the force or blow has been received. But only a few appear to be genuine cases of contre-coup. This is what is meant by contre-coup: Suppose a watch lying with its face towards the table and a weight to fall upon the back of the watch. If the glass cracked, that would be a fracture by contre-coup."

This was the case clearly with this boy. He was struck in the right temporal region, but the skull was fractured at its base, the line of fracture running through both petrous bones and extending probably backward, as the deep-seated pain showed. There was only a slight discoloration to indicate the site where the injury was received. Keetley also says that when the cere-

bro-spinal fluid escapes from the ears directly after an injury it is pathognomonic of fracture of the base.

From these facts above recited I do not believe there is any question but that there was a fracture of the base of the skull extending through the petrous bones, and opening up a communication between the cavity of the tympanum and some of the numerous and large vascular channels which surround this bone, or with an extravasation of blood within the cranium, this last being very likely from the disturbance which the heart, lungs and head showed. And what makes this case unusual and interesting is the fact that he could be about for *eleven* days after the accident without more pronounced suffering in the meantime, which would be expected to correspond, in a measure at least, with the magnitude of the injury.

DISCUSSION.

Dr. VANDER VEER said that fracture through the base of the skull in a child is rare. In this case there was no extravasation of blood in the posterior wall of the pharynx, which is a marked and characteristic symptom and generally present, nor any ecchymosis of the eyelids, nor any hemorrhage from the nose. An escape of straw-colored serum is one of the positive symptoms.

Dr. HENRY HUN regarded the diagnosis of fracture as improbable. If there had been a fracture, hemorrhage would have occurred at the time of the fracture, and not have appeared first eleven days after the accident. There was no paralysis of any of the cranial nerves, which a fracture of the base would probably have produced. The symptoms suggested rather a case of traumatic meningitis. The otitis media might have been present unrecognized before the accident or might have had a traumatic origin at the time of the accident.

Dr. THOMPSON: Some years since, I was called to see a laboring man, aged 40, who was injured on the left parietal eminence, fracturing both the outer and inner tables of the skull. After removing portions of fractured bone the patient was comfortable for some days. On the fifth day there was a rapid pulse, high temperature and a discharge of sero-plastic lymph from the opening, which continued for many days. About the twentieth day after the accident the patient developed decided symptoms of stiffening of the left leg and arm, which continued to increase. The neck became rigid and he lost his speech. He died ninety days after the accident. Removing the calvarium, the dura mater on the left side was quite free from any trace of inflammation, while on the right it was covered with a deposit of coagulated lymph from one eighth to one sixteenth of an inch in thickness, extending down to and spread over the surface of the tentorium. In the left orbital space there was a deposit of lymph one-half inch wide and one and a half inches long. This was the only offending substance found in the left cerebrum. The patient had complained constantly of severe pain over the left eye.

A RHINOLITH.¹

BY J. M. BIGELOW, M.D., ALBANY.

(ALBANY MEDICAL COLLEGE, 1870.)

Professor of Materia Medica, Therapeutics, Clinical Laryngoscopy and Diseases of the Throat.

Mrs. F., æt. 23, came under my notice February 12, 1887, complaining of a bad taste in the mouth, and of partial occlusion of the left nostril. There was no offensive odor to the breath. A rhinoscopic examination revealed much swelling of the mucous membrane of the inferior and middle turbinated bones and imperfect closure of the inferior and middle meatus. On using a probe, the end came in contact with a rough substance giving a grating feel. An illumination of the parts, in connection with a nasal speculum and with the application of an eight per cent. solution of cocaine, showed a foreign substance occupying the floor of the lower meatus and forcing upwards and outwards the inferior turbinated bone. The membrane was incised and the rhinolith extracted with a Gross' forceps. It weighed 38 grains, was oval in shape, about $\frac{1}{2}$ inch in thickness, and composed of the phosphate of lime. Its longest diameter was $\frac{3}{4}$ inch, shortest $\frac{1}{2}$ inch, jagged and irregular on borders. Its centre seems to have been composed of a small mass of dessicated mucus.

The patient alleged that she had felt but little inconvenience from the presence of this body, and has suffered from the impeded nasal respiration for ten years or more, and it was ascribed as a sequel of scarlet fever, which attacked her at the age of 13 years. Her diathesis was not gouty, and otherwise she was healthy and well. On the left side of the nostrils she had complained of catarrhal symptoms, also headache. A small portion of the rhinolith was seen on the anterior rhinoscopic examination, black in appearance, but completely buried in mucous membrane. The peculiarity of the case, aside from the size of the foreign body, was the fact that no great inconvenience was complained of, aside from bad taste in mouth. The right nostril was unusually large and patent, and the impeded respiration through the left was slightly discerned by the patient. Since the operation the hypertrophy of the parts has completely disappeared, as well as all other symptoms previously complained of.

¹ Read before the Medical Society of the County of Albany, Wednesday evening, March 6, 1887.

CASES OF RENAL CALCULUS.¹

BY JOHN THOMPSON, M.D., ALBANY.

M., æt. 42, a merchant, was of robust constitution, rarely complaining of sickness of any nature whatever. His father, when about 45 years of age, was troubled with renal colic, which frequently annoyed him for some years; during some of the paroxysms of pain he had passed small calculi. The latter part of the man's life was free of any annoyance of that nature whatsoever. My patient was for some years in the habit during the summer months of drinking largely of soda water. During the summer of 1882, Mr. M. was annoyed occasionally by a painful tenesmus of the bladder and the rectum. At first the paroxysms of pain were of short duration, compelling the patient to lie down on his back for a short time, when the distress would pass away, leaving him feeling as well as usual in a few moments. But during the following year the paroxysms were more frequent and caused greater distress. It was during one of those attacks that I was called to see the patient. I found him in great distress, vomiting, the perspiration rolling freely off his body, with suppression of urine and with tenesmus of the rectum that he described as agonizing in the extreme, without any trace of pain in the region of the kidneys or other parts of the body. I administered hypodermically $\frac{1}{4}$ gr. of sulphate of morphine, which gave relief in a short time. When the spasm of the rectum was relieved, he passed urine freely, which was always dark colored after an attack.

On making a digital examination of the rectum during one of these spasms, I found it difficult to insert my finger into the bowel, the internal sphincter being more rigid than the external. This condition of suffering recurred at intervals until March 1, 1884, when he had a slight chill with a dull pain extending down the left loin, which continued for twelve hours, when suddenly it ceased, and on urinating he felt something pass from the urethra, and found a small calculus. Twenty days from that time he was taken with vomiting and slight pain in the region of the right kidney, extending down towards the bladder, and fifty

¹ Read before the Medical Society of the County of Albany, Wednesday evening, March 23, 1887.

hours after the attack of vomiting there was passed a second calculus. The stones weigh six grains each. Since the passage of the stone from the right kidney the time elapsed is three years. The patient has no return of the trouble.

In this case there was evidently a stone in each kidney. Did the fact that both kidneys were affected—the calculi acting upon the mouth of the ureter of each side—occasion double the amount of irritation of the nervous centres, causing this extreme tenesmus of the bladder, and great rigidity of the internal sphincter of the rectum in this case, such as is not liable to occur from a single stone?

Another question arises about the use of soda water. Does the lime used in its preparation contaminate this popular beverage sufficiently to be a cause contributing to the formation of calculi, or was the cause of renal calculi, in this case reported, entirely hereditary?

Mr. T., æt. 32 years, sexton. For eighteen years has had attacks of severe pain in the left loin, generally attended with vomiting. If taken on the street, he is obliged to sit or lie down on a stoop or on the sidewalk. He would be able to control the pain sometimes by sitting tailor fashion with his left leg bent under him, or by lying down with his feet raised high up. If he attempted to walk a great distance or hurry in his duties about the church, he would bring on his old malady. During one of these painful attacks I was called in and gave morphine hypodermically. The patient briefly related his case to me, and I suggested stone in the kidney, when he said that he had been examined most carefully for stone in the bladder by the best surgeons and physicians of our city and also by a number of prominent medical gentlemen in New York city, with negative result.

Having lately noticed in a British medical journal that Dr. Copeland administered carbonate of ammonia in ten-grain doses three times a day for two years, with permanent relief in a case of renal colic, I ordered Mr. T. to dissolve ten grains of carbonate of ammonia four times daily in water, with directions to take all his stomach would tolerate. The result was that after three months the attacks ceased altogether. The medicine was continued for six months, from April to October, 1885. This man frequently expresses his great pleasure at being relieved, and so far has not had a return of the pain.

At one of the meetings of the late Academy of Medicine of this city, Dr. H. R. Starkweather presented a stone that he found post mortem in the left kidney of a man in West Albany who died suddenly of heart disease. Dr. Starkweather relates that the man was never known to have any symptom of gravel or of any disease of the kidney. At the post-mortem, in place of the left kidney was found a sac containing this irregular mass of stone weighing now 222 grains. The cortical and medullary portions of the kidney were absorbed. The left ureter was extremely atrophied. The right kidney was enlarged, but comparatively in good condition.

DISCUSSION

Dr. A. VANDER VEER: The first case referred to by Dr. Thompson points to the necessity of a careful microscopical examination of the stone, with reference to treatment. The two stones look like oxalate of lime. The mulberry stone produces more pain than any other. There are some conditions simulating calculi, such as the occurrence of phosphates or mucus. A case in the practice of Dr. Steenberg illustrates the danger of operating, there had been severe pain in the right kidney, from which, at the autopsy, there was removed a stone weighing 600 grains, while the left kidney was entirely useless from disease. A similar specimen is in the museum. In phosphatic calculi, treatment by mineral acids is best. The pain differs from that of the uric acid or oxalate of lime calculi. It is confined more to the abdomen, not radiating nor as severe. The late Dr. W., of Albany, suffered frequently from this form, and on one occasion, after ten days' treatment with tinct. ferri chlorid. and acid. sulph., he passed nearly half an ounce of phosphatic calculi. There was no recurrence of the affection for four or five years. The alkaline treatment is advantageous in the uric acid form of calculi. If the latter are of a size too large to pass readily, dilatation or atrophy ensues, and frequently there is a secondary deposit of phosphates. These are fit cases for exploration, and operation has furnished some brilliant results. In the immediate attack morphine hypodermically alone gives relief, but care must be observed as to repetition of doses, especially if chloroform has been previously administered.

In reply to Dr. Skillicorn, Dr. Vander Veer said that he had had good results in the treatment of phosphatic calculi by acids. He does not rely on any one particular remedy. Some cases yield to no treatment. Sir Henry Thompson has written forcibly on the prevention of stone by attention to diet.

The paper was also discussed by Drs. Stillman, Skillicorn and Thompson.

A JUDGE of one of our highest courts was reduced to the verge of the grave with frequent attacks of that excruciating malady, hepatic colic. He was advised to take fluid ext. wild yam—dioscorine, and never after had an attack.—*Atlanta Med. Jour.*

A CASE ILLUSTRATING CEREBRAL LOCALIZATION.¹

BY J. H. MITCHELL, M.D., COHOES.

(ALBANY MEDICAL COLLEGE, 1881.)

While listening to Prof. Hun's interesting paper, "Cases Illustrating Cerebral Localization," read before this society December 15 and 22, 1886, I was mentally comparing a case then in my care which resembled in many of its features one of Prof. Hun's cases.

The patient, J. S., æt. 35 years, male, married, was of a very nervous temperament. No hereditary taint. Had always been healthy, active and industrious. On the evening of December 9, 1886, he complained of a severe pain over the left eye, which he said he had felt for about a week. He described it as a cold in the head. Some time after midnight he was awakened by a strange noise, supposed to be caused by burglars. He sprang quickly out of bed and ran to the window. He was very much excited and trembled violently. After retiring again did not sleep for an hour or two. He arose about 7:30 A. M., dressed and went down into the yard. It was then he noticed his right hand was numb, also a slight numbness in right leg. When he entered the house his wife asked him some question in regard to the disturbance in the night. He then discovered he could not articulate. When his wife noticed this, she gave him a slate and told him to write. But after a few efforts, in vain, he exclaimed, "I cannot."

I saw him about ten o'clock. I found no impairment of motion or sensibility of either leg, although he complained of a slight numbness of the right leg; good motor power in arm and forearm, but awkwardness in the movement of the right hand. For instance, when putting his hand in his pocket, he would discover upon pushing down that one or more fingers were on the outside, or in grasping coin there he could not tell the difference between a half dollar and a ten-cent piece. The sensibility of forearm and hand were considerably impaired, as he could not distinguish two points on the forearm if they were less than two inches apart; he could not tell how many points there were if one was

¹ Read before the Medical Society of the County of Albany, Wednesday evening, March 9, 1887.

on the little finger and the other on the thumb, or if they were on the opposite sides of the hand. He could speak quite plainly; if he was asked a question, he would answer correctly, but very slowly. At times he was at a loss for the right words to express himself and after trying several times to find the word he wished to speak he would become irritated and could not say any thing. For example, when taking his pulse and finding it 48, I remarked, "You have rather a slow pulse." He said, "Yes, I have had a— and stopped, tried again, but could not utter the word; again and again he tried with no better result. Finally, becoming irritated, he exclaimed, "Pshaw!" and for a short time could not answer the most simple question. After guessing at a few words to help him, some one, interpreting a sign he made, pronounced the word "physician;" he immediately said, "Yes, I had a physician tell me that before."

Patient was kept as quiet as possible for about two weeks, and gradually improved. On January 3d the following condition was found: Patient anæmic and nervous; heart not enlarged, but the apex beat abnormally strong and accompanied by a thrill; thrill also over subclavian artery; no cardiac murmurs; loud venous hum in neck. No trace of aphasia remains, except a slight hesitation before speaking certain words. Patient can recognize certain objects when placed in his right hand, but not very small objects, while he recognizes these small objects readily when placed in his left hand, his eyes, of course being closed. He cannot spell nearly as well as he could, and his hand-writing is poor.

His condition continued to improve, and he went to work January 15th. A few days ago there was found but little remaining of the symptoms described on our first examination. There is impairment of sensation still existing in the middle, ring and little finger of right hand. He cannot recognize small objects in the palm of right hand, with these three fingers, but can readily recognize the same objects when shifted between thumb and index finger, or when placed in palm of left hand with the middle, ring and little finger of that hand. His spelling and writing have also improved somewhat.

This case corresponds in many respects to Case III. reported by Prof. Hun [ALBANY MEDICAL ANNALS, January, 1887], in which was found an occlusion of the terminal portion of the left middle cerebral artery.

A CASE OF MULTIPLE VESICULAR PURPURA.¹

BY P. J. KEEGAN, M.D., ALBANY.

A child, 3½ years old, usually of good health, had pneumonia of both lungs, which ran a favorable course. Two weeks after resolution had begun, spots appeared, apparently deep beneath the skin, from an eighth to a quarter of an inch in breadth. They were faint blue at first, becoming darker, slightly elevated and larger. They were first noted about the roots of the hair and scalp; later they appeared on the arms, legs and body, also on the face, conjunctiva, tongue and fauces. These spots probably existed throughout the alimentary canal, as hemorrhages from the bowels took place on the fifth day and continued at intervals for three days. When these purple spots had progressed to the surface of the skin, they were found to contain dark fluid blood, and if cut, the blood flowed over the surface. Where the eruption was not interfered with, the blood dried and came away in dry dark scales. For about two weeks the spots continued to appear in new localities, as the old ones disappeared. The child was then very weak and anæmic, but began again to convalesce, and made a good recovery.

GASEOUS ENEMA—PREPARATION OF H₂S.

BY S. W. LITTLE, CHEMICAL LABORATORY, UNION COLLEGE,
SCHENECTADY, N. Y.

[FOR ALBANY MEDICAL ANNALS.]

In certain forms of disease it is desired to pass into the rectum a mixture of CO₂ and H₂S.

There have been various methods of making this mixture, the general principle being to pass the carbon dioxide through such a solution that it shall add to itself hydrogen sulphide.

One method is by passing this gas through water containing H₂S in solution. This is unsatisfactory for several reasons. In the first place, it is a difficult matter to get such a solution;

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again, a solution of H_2S in water quickly decomposes, and also loses its gas by diffusion into the air.

Another method is to pass the CO_2 through a solution of some alkaline sulphide, as sodic sulphide. The trouble here is that these sulphides are not easily prepared, and the action of the CO_2 on the sulphide liberates the H_2S very slowly; in fact, it takes several hours to decompose entirely a small amount of sodic sulphide.

In experiments performed in the chemical laboratory of Union College, I have found that a sulphide of calcium can be easily prepared, and is very effective for this purpose. By fusing together equal parts of lime and sulphur a yellow mixture is formed, which contains calcium sulphide, soluble in water. This fused mass can be broken up and placed in a bottle with water, which will dissolve out the CaS . Then, when CO_2 is made to pass through this solution, calcium carbonate is formed and H_2S is set free, giving a mixture of CO_2 and H_2S in the gaseous form, which passes out of the bottle. All impurities of the CO_2 are held by the lime, the mixture of gases requiring no further treatment.

CORRESPONDENCE.

The following is interesting as showing the work done by a graduate of the Albany Medical College, class of 1880:

REICHENBERG, BOHEMIA, AUSTRIA, May 30, 1887.

Prof. A. Vander Veer, M.D.:

My Dear Friend—Your welcome and long-looked for letter of March 2d came duly to hand, and should have been answered long before this, but just as it came I was working as hard as I could to close my studies at Vienna and come to this place; so I trust you will not feel that I have forgotten your many kindnesses to me, nor forgotten to answer your letter. I left Wien late in April, after working a little over six months in the laboratory of Prof. Schenk (whose kindness I can never forget) on histology, embryology and bacteriology; five months in the laboratory of Prof. Kundrat on pathological anatomy, and attending the clinics and lectures of Profs. Albert on surgery; Breiskey and Karl Braun on obstetrics and gynecology; Ultzman on diseases of the urinary tract; Dittle on operations of the same; Neuman on syphilis; Schroetter on internal medication and diseases of the throat, on which I did special work for two months; Gruber on the ear, which was all clinical and special work. These lectures and clinics I attended some for two months, but those on surgery and

gynecology regularly for six months. I also did special work on surgery with the first assistant of Prof. Albert for over three months, both operative and diagnostic, spending many hours in the wards, also special work on gynecology with Prof. Powlik. With this professor I had an operative course, in which a friend and myself used up twenty one subjects during several operations on some of them. The course is the best ever given in Vienna, and will be given no more. I would not have been able to get the course, had it not been for Prof. Schenk. Powlik only gave it to two of us to accommodate Prof. Schenk. In this course I learned one or two new operations not in the books belonging to the professor himself—one for incontinence of urine, another for exploring ureters. We also had a private touch or diagnostic course of much value, lasting five months; a diagnostic course with Prof. Pritzl, the first assistant of Prof. Braun; Dr. P.'s course is also very celebrated, but he has left, so will give no more; a course on diagnostic and operative obstetrics with Dr. Piskacek, first assistant of Prof. Briesky. With Dr. Piskacek we did much ward work, using forceps in many cases, assisting in one decapitation, one crushing, etc., and turning until I was truly tired of it. The course we had in operative surgery was very fine, including all surgical operations, while in regular courses only the amputations, resections and ligations are given. For this course my friend, Dr. Valle, of St. Louis, and myself paid ten guilders an hour, the whole course costing us over 400 guilders, but I do not regret it, for I feel that I have learned something. On May 1st we (Dr. V. and myself, who, by the way, have formed all the private classes I have had, as we always bought the teacher and had all, in the general private classes there being far too many for one to learn much, as the classes run from ten to sixty men) left Vienna and came to this place, Reichenberg, at the request of the United States consul, as he was the only American in the place, and it was lonely for him. He made application to the board of managers of St. Stephen Hospital here, and got us a splendid situation—much better than we had in Wien, and for less money. The doctors are, except one, all old men, and are only too glad to have some one do the operations for them; so we do all of them, under their instruction, but virtually as we wish, and we have something to operate upon every day. Saturday we amputated a forearm; to-morrow I operate for the radical cure of hydrocele of the cord. We hold post-mortems almost every day, and go into the wards and examine any cases we wish. There is no resident doctor, so we have full swing. We have a special course every day with Dr. Vinzenz Jahannovsky, formerly first assistant of Prof. Briesky while in Prague. Dr. J. is the best gynecologist I have seen since I came to Europe. We do all the small operations now, and he says he will soon let us do large ones. He is the best teacher that I have yet seen. He has us examine every case and make our own diagnosis and tell why; then he tells us what the case is, and when we are wrong, he tells and shows us why and where. We treat every case, reduce all displacements, etc. Material is plenty, and we usually get from two to three hours a day. I only wish that I had known of this place nine months ago. There is a great plenty and variety of cases in all parts of the hospital. As the town is a large manufacturing place, it furnishes

much surgical work. Then, there is lots of lung and heart trouble here, for which they use only morphia and wine. Venereal troubles are very plenty, as they seem to be all over German Europe. The hospital has over 300 beds, and is more than full, as now some beds are on the floor. It is the only hospital in northern Bohemia, and is well patronized.

I saw a case the other day that interested me very much, as I had never seen one before or ever heard of it. I give you a short description of the case which Dr. J. diagnosed as *Wandering Liver*, and his diagnosis was sustained by the others of the staff. The case was that of a woman aged 35 years; looks older; has had several children; housewife; does much hard work on the farm; also has, ever since large enough, carried heavy loads on her back. After her last confinement, about seven months ago, she got up and went to work as usual; after lifting a heavy load, noticed pain in her right side, as if she had strained herself; paid no attention to this for some days, when she noticed a tumor on right side of abdomen, which would, as she said, go away at night or when she did not work much, but returned as soon as she began to work in a stooping position, as she had to do in the fields, and when it returned caused pain. Now it does not return at all, but fills up the right side of abdomen, and causes much pain. The tumor reaches nearly to median line in front, and passes backward to spinal column. Upon percussion, the space usually occupied by liver was found vacant; sound resonant; all other organs were healthy; all pelvic organs could be felt in position. This case had been mistaken for cancer of the liver. Dr. J said he had seen such before, but only in women who had borne children. I have full notes of this case, but no doubt you have seen many of them, and it will not be of interest to you.

I shall remain in this place until September, then go to England and try to stay with Mr. Tait a short time, as I am told he lets a few into his hospital. * * *

ABSTRACTA.

GYMNEMIC ACID.—(Extract from a paper read at a meeting of the Nilgiri Natural History Society, at Octacamund, India, by David Hooper, on "An Examination of the Leaves of the *Gymnema Sylvestris*.") This is a plant growing in the Deccan Peninsula, in other places in India, and also in Africa. The powdered root has for a long time been known among the Hindus as a remedy for snake-bites. It is applied locally and taken in the form of a decoction internally. The most curious property of this plant is its effect upon the sense of taste. When the leaves are chewed, all power to appreciate the taste of sugar ceases. Powdered sugar tastes like so much sand. When an insufficient quantity of the leaves are chewed, the sugar has a saltish taste. In gingerbread the taste of the sugar disappears and that of the ginger alone is detected. A sweet orange tastes like a lime. Sulphate of quinine tastes like so much chalk. The effect seems

to last for several hours. The active principle of the leaves Mr. Hooper calls gymnemic acid. It does not affect the power of tasting sour, saline or astringent substances. He proposes to investigate its medicinal properties.—*Contributed by Professor Maurice Perkins, M.D., Union University, Schenectady.*

GAS ENEMATA.—The truth about the gas treatment of phthisis is gradually being threshed out, and it begins to look as if the yield per acre was scarcely worth the trouble of harvesting. Dr. Bruen, in whose wards the method has been most extensively tried, tells me that in about 100 cases two or three only have been benefited. A majority of the patients who at first did so well have relapsed while under treatment, and are as bad as before its use. At the University Hospital, Dr. Griffith has been making careful observations. The results are practically negative.—*Dr. William Osler, Canada Med. and Surg. Journal, June, 1887.*

THE INFLUENCE OF THE BERGEON TREATMENT ON THE INFECTIOUSNESS OF PHTHISIS.—At the recent Congrès des délégués des sociétés savantes, as we learn from our Paris correspondent, M. Lamallercé, after giving it as his opinion that the Bergeon method of treatment was inefficient in the cavernous stage of phthisis, although very useful in other stages, made the important statement that, whereas he had succeeded in communicating tuberculosis to chickens by making them swallow the sputa of phthical patients, he had not been able to infect them when he used sputa from persons who were under the Bergeon treatment at the time.—*N. Y. Med. Jour.*

"THE NEW SURGERY."—Within a few years the practice of surgery has undergone a great change; indeed, it has almost been revolutionized. The profuse suppuration of the old days, with the "laudable pus" so gladly welcomed, is superseded by primary union. Erysipelas, pyæmia and septicæmia no more close the wards and prevent operative interference. The fear of opening the joints belongs to the past. Within the month I have seen the knee-joint opened, washed out, and the broken patella wired, with prompt union and restored function. Complicated compound fractures are dressed and left untouched for a month, with the result of good union. The peritoneal cavity is opened as a diagnostic measure, large tumors dissected out, and segments of the intestine excised. Operations not before attempted are now aggressively and confidently executed, and that, too, in the atmosphere of large general hospitals. Notwithstanding this, there are members of the profession who declare that they do not believe in "the bug theory," and inveigh against what they are pleased to call the tyranny of the germs." But that does not explain the great improvement in wound-treatment and its splendid results. Neither does "the

gospel of cleanliness" detract in any degree from the value of the antiseptic method, but is only the substitution of one essential part for the entire system. The principles of the antiseptic system are absolutely essential in obtaining these results, though the manner of their application in respect to details may vary with the fancy of various operators. The introduction of the antiseptic system into surgical, gynecological, and obstetrical practice marks the greatest advance in medicine of the century—excepting, of course, anæsthesia. The system attains an exalted degree of cleanliness, a degree which can only be certainly and uniformly attained by the painstaking application of antiseptic methods. To be equipped for antiseptic work and familiar with antiseptic methods is the plain duty of every practitioner who does surgical practice.—*Dr. L. S. McMurty in South-Western Medical Gazette.*

SEWAGE DISPOSAL.—The porous carbon process, inaugurated some short time ago at Southampton has, up to the present, been a decided success. Reservoirs have been constructed, where the sewage of some thirteen thousand of the population is collected. Here it is mixed with a small proportion of porous carbon, which precipitates the solid matter and gives an effluent water so clear, colorless and inodorous that some people have been courageous enough to taste it. The merit of the mineral powder is that it is rich in available iron, alumina and carbon, and it is singularly effective as a precipitant. Besides its chemical attributes, it possesses also the physical one of extreme porosity, which makes the oxygenation of organic matters held in suspension very rapid. The importance of this point is that, unlike sewage treated with lime, there is no secondary decomposition set up to pollute the rivers into which the effluent water is poured. From the reservoirs the residuum of the sewage is conveyed, by the use of Thone's pneumatic ejector, through pipes to the sanitary works, about a mile distant from the tanks, where it is mixed with town sweepings and refuse, producing a manure for which there is a ready sale to the farmers at 2s. and 6d. a ton. Any of the sludge that cannot be got rid of is destroyed in "destructors," which have been erected on the works.—*Am. Prac. and News.*

WHY DO BEES AND WASPS STING?—Their weapons often serve to protect them from their enemies, but with bees, especially the honey or hive bees, at the approach of winter, the drones or males are no longer of any use, and are killed off by the stings of the workers, to save the stores of honey they would otherwise consume. With many of the wasps their stings are food preservers. The large wasps which make their holes in the ground, and some bees, like the Carpenter bees, which cut circular holes in boards or other wood, deposit an egg in one of these holes, place food for the grub that will hatch from this egg to

feed upon, and when this grub has made its growth, it goes into the chrysalis state, and in time comes out a perfect bee, or wasp, as it may be. But you will ask, "What has this to do with the sting?" A great deal. If the caterpillar or other insect, intended as food for the young bee or wasp, were dead when stored away, it would decay and be useless. The effect of the poison of the sting is to keep it in a semi-torpid existence, alive, but still dormant, and thus preserve the food in a proper condition to be eaten by the grub of the bee or wasp. In this respect we can see that the sting plays a very useful part, but when the sting is employed upon ourselves, we fail to see what good end is accomplished. Even when a bee-keeper is doing his best for the comfort and welfare of his bees, they will often turn upon and sting him most needlessly and painfully.—*American Agriculturist for July.*

At a recent meeting of the Physiological Society of Berlin, it was stated that when the bee has filled the cell either with pure honey or a mixture of pollen-dough and honey, and has completed the lid, a drop of formic acid obtained from the poison-bag connected with the sting is added to the honey by perforating the lid with the sting. Numerous experiments show that this formic acid preserves honey and every other solution from fermentation. If this be well established, it will show that the sting and the poison apparatus of the bee has a further purpose than that of a defensive or offensive weapon. Another interesting fact suggests itself in connection with this. So far as is known, most of the insects that have stinging apparatus similar to that of the bee are collectors and storers of honey.—*American Druggist.*

IODOFORM IN HEART DISEASE.—About a grain in four pills, one to be taken every two hours, has rapidly dissipated the functional derangements dependent on valvular disease. The experimental results obtained in dogs completely concur with those furnished by clinical experimentation, in demonstrating that in dogs iodoform retards cardiac contraction, and this delay increases the total duration of each cardiac cycle, and also the efficiency of the systole.—*Am. Prac. and News.*

THE AMERICAN MEDICAL ASSOCIATION, at Chicago, June 9, elected: President, A. Y. P. Garrett, of Washington; vice-presidents, Drs. Duncan Eve, of Nashville; Darwin Colville, of New York; Charles J. O. Hagan, North Carolina; I. Stedman, Colorado; librarian, C. H. A. Kleinschmidt, Washington; treasurer, A. J. Dunglison, Philadelphia; secretary, Dr. William B. Atkinson, 1,400 Pine street, Philadelphia. The next place of meeting was fixed at Cincinnati.

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

EDITORIAL COMMITTEE:

F. C. CURTIS, M.D.,

A. VANDER VEER, M.D.,

LORENZO HALE, M.D.,

JNO. BEN. STONEHOUSE, M.D.,

WILLIS G. TUCKER, M.D.

VOL. VIII.

JUNE, 1887.

NO. 6.

BOOK NOTICES.

DISEASES OF THE EYE. By Dr. Édouard Meyer, Prof. à L'École Pratique de la Faculté de Médecine de Paris; Chevalier of the Legion of Honor, etc. Authorized Translation by Freeland Fergus, M.B., Assistant Surgeon, Glasgow Eye Infirmary. Colored plates printed under the direction of Dr. Richard Liebreich, M.R.C.S., Author of the Atlas of Ophthalmology. With colored plates and 267 engravings on wood. Octavo, 650 pages. Cloth, \$4.50; leather, \$5.50. P. Blakiston, Son & Co., Philadelphia.

This book has gone through three French and four German editions; has been translated into Italian, Spanish, Polish, Russian, Japanese—this, the English edition, making the eighth language in which it has been published.

Dr. Fergus, the translator, says in his preface: “*À bon vin il ne faut point de bouchon*”—and Dr. Meyer's treatise needs no comment from me. Therefore, in laying the work before an English public, I would only express a hope that it may prove as helpful to others as it has been to myself. The original work struck me as being not only the most concise, but also the most comprehensive manual on the branch of which it treats that I have ever perused; and it was this conviction which led me to undertake the translation—in the belief that the excellence of the subject-matter would be found to outweigh far any deficiencies on my own part.”

Synopsis of Contents.—Diagnosis and Treatment of Ocular Affections; Diseases of the Conjunctiva; Diseases of the Cornea

and Sclerotic; Iris—Ciliary Body—Choroid; Glaucoma; Diseases of the Optic Nerve and Retina; Amblyopia and Amarausia; Diseases of the Vitreous Body; Diseases of the Crystalline Lens; Refraction and Accommodation; The Muscles of the Eye; Diseases of the Eyelids; Diseases of the Lachrymal Passages; Diseases of the Orbit; Table of Dioptries; Index.

ANÆMIA. By Frederick P. Henry, M.D., Professor of Clinical Medicine, Philadelphia Polyclinic, etc. 136 small 16mo pages, boards, 75 cents. P. Blakiston, Son & Co., Philadelphia.

"This is the first systematic treatise on anæmia published in this country, is a reprint of a series of articles published in *The Polyclinic* during the past year, and embodies the results of many years' study of the blood and the disorders consequent upon it imperfect elaboration."

Anæmias are classified as (1) primary or essential, (2) secondary or symptomatic, (3) toxanæmias, (4) parasitic anæmias.

A PRACTICAL TREATISE ON OBSTETRICS. Vol. IV. Obstetric Operations. The Pathology of the Puerperium. By A. Charpentier, M.D., Paris. Illustrated with lithographic plates and wood engravings. This is also Vol. IV. of the "Cyclopedia of Obstetrics and Gynecology" (12 vols.), issued monthly during 1887. Price of the set, \$16.50. New York: William Wood & Company.

Probably of greater practical value than the previous volumes of this remarkable treatise.

OUTLINES FOR THE MANAGEMENT OF DIET. Edward Tunis Bruen, M.D., Assistant Professor of Physical Diagnosis, University of Pennsylvania, etc., etc. 138 pp., 12mo, cloth, \$1.00. Philadelphia: J. B. Lippincott Company. 1887.

This is one of the series of "Practical Lessons in Nursing" published by the Lippincott Company. It gives points on the physiology of digestion, requirements in different periods of life, how to reduce and how to increase flesh, the discussion of beverages, special plans of diet, and diet in specified acute and chronic diseases, etc.

EARTH IN SURGERY. By Addinell Hewson, M.D. Second edition, with four photo-relief illustrations. 309 pp., large duodecimo. Price, \$1.00. Medical Register Co., 1519 Walnut street, Philadelphia.

The Medical Register Company publish *The Medical Register*, a weekly medical journal, live, practical and interesting, for

\$3.00 a year, said to be the largest weekly ever published for the price. The editors are John V. Shoemaker, A.M., M.D., William C. Wile, M.D.

The same company are publishing a "practical series" of medical books, of which "Earth in Surgery" is the first. It is the second edition of the work published in 1872, and is issued to meet the demands constantly made for the work, and especially for it as it was originally produced; the author has not seen fit to alter it in any respect.

The "earth" used is yellow subsoil clay, from deep diggings, dried, but not roasted, and sifted through a fine flour-sieve, and entirely free from sand, grit or foreign matter. The earth-dressing has been followed by remarkable results.

The book is profitable and entertaining reading.

A VOLUME OF POEMS: LOVE'S TRIBUTE. By Edward Babcock Atkins, M.D. (A. M. C., 1874), New York. The Knickerbocker Press. 1887.

This volume, evidently printed for private circulation, is dedicated by Dr. Atkins to the memory of his wife, "for whom these lines were written;" but the poems, although mostly of a personal nature, are such as will appeal to every lover of melodious verse, graceful style and true sentiment. Some are light and playful, others witty and epigrammatic, and others touchingly pathetic, but with no false sentiment or mere display of grief. Evidently they spring directly from the heart—from a heart saddened by an irreparable loss, but not disconsolate. That the author possesses a truly poetic instinct and an originality which place him far above the level of the mere versifier is evident on a hasty perusal of the contents of this volume, and a careful reading justified the opinion that he has the ability to produce works of lasting value.

The book is elegantly printed by the Messrs. Putnam on rough laid paper and tastefully bound in Russia leather and vellum. It is fitting that these beautiful poems should have been clothed in a beautiful dress.

THE VEST POCKET ANATOMIST (founded upon Gray). By C. Henri Leonard, M.D., Professor of Diseases of Women, Detroit College of Medicine. 13th Edition. Anatomical Triangles and Spaces, Herniæ, Gynæcological Anatomy and Dissection Hints. Detroit: The Illustrated Medical Journal Co., 1887. Cloth, 154 pp., postpaid, 75 cents. The cuts are photographed from Gray's Anatomy.

ELEMENTS OF BOTANY. Including Organography, Vegetable Histology, Vegetable Physiology and Vegetable Taxonomy, and a Glossary of Botanical Terms, illustrated with nearly five hundred engravings from drawings by the author. Index of subjects and index of names of plants. By Edson S. Bastin, A.M., F.R.M.S., Professor of Botany, Materia Medica and Microscopy in the Chicago College of Pharmacy. Cloth, octavo, 300 pages, \$2.50. Chicago: G. P. Engelhard & Co. 1887.

This book is not so technical as to repel a new student, nor is it simplified for very young beginners. The student is taught to observe accurately structures already familiar, and then led into the intricacies which need trained observation and skill with the microscope. A description is given of the microscope, accessory apparatus, staining and mounting fluids, etc. Directions for practical exercises are interspersed as required, and are an attractive feature. Fungi, algæ, mosses, ferns, etc., are classified.

OUR COUNTRY: Its Possible Future and its Present Crisis. By Rev. Josiah Strong, D.D., with an Introduction by Prof. Austin Phelps, D.D. 229 pages, 12mo, paper, 25 cents; cloth, 50 cents. The Baker and Taylor Co., publishers, 9 Bond street, New York.

This remarkable book, in the few months which have elapsed since its publication, has passed through successive editions until now the fiftieth thousand has just left the press, and the demand for it is unabated.

EXCHANGES, PAMPHLETS, ETC.

Virginia Medical Monthly. Landon B. Edwards, M.D., Secretary of the Medical Society of Virginia since its organization, 1870, etc., editor and proprietor. Established April, 1874. Annual Volume XIV. began with April number, 1887. To be enlarged to over 1,000 reading pages a year; Each annual volume thoroughly indexed. Subscription, \$3.00 a year. single copy, 30 cents. Beginning with the April number, 1887, the *Virginia Medical Monthly* introduced an entirely new feature, which no other journal has attempted. In the department of "Analyses, Selections, etc.," *synopses* are given of every original article appearing the month before in every regular monthly medical journal published in the states south and southwest of Virginia, including those of Kentucky and Tennessee. The advantages of this feature to practitioners and medical writers everywhere are self-evident, especially to those who wish to know what is being contributed by the southern profession, but cannot spare the money to take, or the time to read, all of the journals referred to. Though this feature was first described late in April, it has become wonderfully popular. Many new subscribers write that the *Virginia Medical Monthly*, in adopting this feature, has hit exactly upon the very thing they have often and long wanted, etc. As a special offer for subscriptions, each person sending, within a month or so,

\$2.75, will receive, in addition to the other numbers of annual Volume XIV.—issued or yet to be issued, so as to make a complete file from April number, 1887, through March number, 1888—an octavo pamphlet copy of "A Treatise on Malarial Hemorrhage, Embracing Epistaxis, Odontorrhagia, Stomatorrhagia, Hæmoptysis, Hæmatemesis, Enterorrhagia, Metrorrhagia and Hæmaturia, etc. By Otis Frederick Manson, M.D., Honorary Member of the Medical Society of North Carolina; Emeritus Professor of Physiology and Pathology, Medical College of Virginia, etc. Pages 118; just issued. Also an octavo pamphlet copy of "A Treatise on the Physiological and Therapeutic Action of the Sulphate of Quinine." By same author; pages 69. Address *Virginia Medical Monthly*, Richmond, Va.

The International Standard, from whose pages we have often copied satire and argument against the French metric system, is published bi monthly at 64 Euclid avenue, Cleveland, Ohio. Each number contains from 76 to 100 octavo pages. Price, \$2.00 a year, or 35 cents per copy. The numerous articles presented are of great value and interest to every American, whether schoolboy, artisan, practitioner or professor.

The American Journal of Dental Science, edited by F. J. S. Gorgas, M.D., D.D.S. Monthly, octavo, \$2.50 a year. Baltimore, Md.

The New Idea. "A monthly journal of true pharmacy, in opposition to quackery in pharmacy." 8-page quarto, 50 cents a year. Frederick Stearns & Co., Detroit, Mich.

The Concordiensis, Union College, Schenectady, N. Y. 16 pages, quarto, monthly, \$1.50 a year.

The West River News, South Londonderry, Windham Co., Vt. C. W. Harrington, editor and publisher. Containing a description of a health resort.

"A New Diabetic Food: Lactated Food in Diabetes Mellitus." [The following case is said to have occurred in the Practice of Prof. A. P. Grinnell, M.D., Burlington, Dean of the Medical Department, University of Vermont:] "A man 22 years of age had been suffering from headache, prostration, intense thirst and a voracious appetite for several months. Upon examination of him, in March last, he had all of the above symptoms; had become too feeble to walk, and was practically confined to his bed. He was voiding 12 quarts of urine in 24 hours, which, upon analysis, showed a specific gravity of 1086—four grains of sugar to the ounce. His thirst was intolerable, his appetite unnatural, craving starchy and saccharine food; was unable to sleep, and obstinate constipation existed for several weeks. He was put upon Lactated Food and skimmed milk, allowed to drink all he wanted of these, but denied water or any other article of food. In 48 hours the quantity of water voided was reduced to 3 quarts. In one week his food and drink consisted wholly of Lactated Food, and the general improvement in his symptoms was most marked. He continued on this diet for two months, and, so far as I could determine, all the prominent symptoms of diabetes. He was voiding but one quart of urine in 24 hours, sp. gr. 1016, bowels regular, could sleep without anodynes, had gained in strength, and was walking about. At this time, six months after adopting this plan of treatment, he is at work, has no apparent symptoms of the disease, and is allowed to take a mixed diet, simply avoiding starches and sugars."

"No. III.—The Uses of Massage in Medical Practice. Tracts on Massage, translated from the German of Ribmayr, with notes, by Benjamin Lea, A.M., M.D., Ph.D. Philadelphia, 1887."

"A Case of Broncho-Pulmonary Mycosis." William F. Waugh, M.D. From *Philadelphia Medical Times*.

"Periostitis." N. Senn, M.D., Milwaukee, Wis., Prof. of Principles and Practice of Surgery and Clinical Surgery, College of Physicians and Surgeons, Chicago, Ill. *Philadelphia Medical Times*, July 24, 1886.

"Curability of Epilepsy by Galvanism and Bromides." C. H. Hughes, M.D., St. Louis. From *Alienist and Neurologist*.

"Vesical Irritation in Women." Virgil O. Hardon, M.D., Lecturer on Operative Gynæcology, Southern Medical College, Atlanta, Ga. *Atlanta Medical and Surgical Journal*.

"The Past, Present and Future Treatment of Homœopathy, Eclecticism," etc. Henry J. Bowditch A.M., M.D., Harv. Delivered June 10, 1886, before the Rhode Island Medical Society. Cupples, Upham & Co., Boston.

"The Doctorate Address," Semi-Centennial, University of Louisville Medical Department, March 2, 1887. David W. Yandell, M.D., Professor of Surgery and Clinical Surgery.

American Public Health Association, Fifteenth Annual Meeting, Memphis, Tuesday to Friday, November 8 to 11, inclusive, 1887.

"Medical Education in the United States; Its Defects and the Remedy." R. S. Sutton, A.M., M.D., LL.D., Pittsburgh, Pa. President's annual address, American Academy of Medicine, Pittsburgh, October 12, 1886.

"A Successful case of Partial Excision of the Larynx, on account of Intra-Laryngeal Epithelioma." Lennox Browne, F.R.C.S. Ed. *British Medical Journal*, Feb. 5, 1887.

"Weekly Abstract of Sanitary Reports," Treasury Department. John B. Hamilton, Supervising Surgeon-General, U. S. Marine Hospital Service.

"New Treatment of the Affections of the Respiratory Organs and of Blood Poison by Rectal Injections of Gases after the Method of Dr. Bergeon, Senior Deputy Professor of the School of Medicine at Lyons." By Dr. V. Morel. Translated from the French by L. E. Holman. Price, postpaid, 25 cents.

Also a pamphlet giving reprints of the best articles published on the new treatment of consumption in this country, and an illustrated catalogue of specialties for physicians. Published by James W. Queen & Co., Philadelphia, Pa.

"Dietetics." Wells, Richardson & Co., Lactated Food, Burlington, Vt.

"A Treatise on Some Diseases of the Bones and Ligaments of the Spine." S. M. Cate, M.D., Washington, D. C.

"Mental Epilepsy." L. W. Baker, M.D., Superintendent Hospital Cottages for Children, Baldwinville, Mass.

"The Claim of Moral Insanity in its Medico-Legal Aspects." By James Hendrie Lloyd, M.D., Instructor in Electro-Therapeutics in the University of Pennsylvania. Reprinted from *The Medical Record*, May 14, 1887.

"Pelvic Inflammations; or, Cellulitis versus Peritonitis." By Thomas Addis Emmet, M.D., Surgeon to the Woman's Hospital, New York. Reprint from Vol. XI. Gynecological Transactions, 1886.

"Congenital Occlusion of the Posterior Nares." Alvin A. Hubbell, M.D., Buffalo, N. Y. Reprint from *Buffalo Medical and Surgical Journal*, December, 1886.

"Bromidia in Nervous Diseases." W. H. May, M.D., New York.

American Academy of Medicine, Annual Address, October 12, 1886, by R. S. Sutton, A.M., M.D., President, Pittsburgh, Pa.

Report of Committee on Disinfectants, fourteenth annual meeting American Public Health Association, Toronto, October, 1886. Printed in Concord, N. H. Copyrighted by Irving A. Watson, secretary.

Oration delivered before the Alumni Association of the Medico-Chirurgical College of Philadelphia, April 7, 1887, by Dudley S. Reynolds, A.M., M.D., of Louisville, Ky.

MEDICAL NEWS.

ALBANY MEDICAL COLLEGE.

Repairs and improvements have been made to the College building every year of late, and this season the alterations are of such a nature as to attract more than usual attention. Steam heat is being introduced into the building, which has heretofore been heated in an old-fashioned way by means of furnaces and stoves. As a result the halls have been cold and the rooms not equably warmed, but with the new apparatus all parts of the building which are in use will be uniformly heated to a comfortable temperature, while by the construction of fresh-air inlets the lecture-rooms* will be thoroughly ventilated. The work is being done by Robbins & Gammell, of Pittsfield, Mass. A twelve-foot horizontal tubular boiler is placed in the basement and coils and radiators in the halls or rooms, with some indirect radiation in the lecture-rooms for the purpose of supplying fresh air. The work is progressing rapidly.

Another improvement is being made which will be appreciated by the students. It consists in remodelling the amphitheatre and furnishing it with comfortable chairs. The old seats, which were narrow, high-backed and uncomfortable, have been removed and the slant changed, five tiers of seats replacing six, making the distance from back to back a fifth greater than formerly. Ample room it thus obtained for large, comfortable chairs with a writing-arm attached to each and plenty of room for the legs in front. Ogden & Wright made the plans and the work is being done by Wickham.

All the work will be completed before the opening of the next session, which occurs September 20th. The introductory address will be delivered by Professor Henry Hun, M.D.

W. G. T.

INTERNATIONAL MEDICAL MISSIONARY SOCIETY.

NEW YORK, June 7, 1887.

Editorial Committee of the Albany Medical Annals:

Gentlemen—One is pleased to find that a new Medical Missionary Society has been established, and that in Albany. Let the good work continue.

In the editorial of the May number of the *ANNALS* I note: "A similar society has been for some years in existence at the West." It appears that it would be well that the readers of the *ANNALS* should know where the medical missionary movement in America started and how much has been done.

The New York Medical Missionary Society was instituted in New York city in 1881, incorporated in 1886, and at its last annual meeting its name was changed to and its scope broadened into that of the International Medical Missionary Society. The Society has an institute at 118 East 45th street, where there have been, during the past year, twelve young men preparing for missionary fields. Two are to go to Thibet, the remainder to other foreign lands. They will, as far as possible, support themselves as *medical missionaries*.

Besides its institute, the society has six dispensaries in New York city and one in Brooklyn, and more are to be established as soon as possible. Last year there were at the dispensaries 3,596 new cases; with old cases, 7,590 attendances; and 1,653 visits were made; total, 9,183. The figures during the society's existence are: New cases 14,724; dispensary attendances, 32,542; visits, 6,923; total, 39,465.

The students are provided with special advantages at the institute and at the society's dispensaries; in the former they have a Christian home—no small thing in a great city—and lectures, introductory to the college course and supplementary thereto, are provided on special subjects. At the dispensaries they get *practical* training, both medical and religious, by actually engaging in the work they are going to do abroad.

The chief aim of this society is to train men and women for service under the regular mission boards, but if any desire to go out on an unsectarian basis, like the Chinese Inland Mission, which now has two hundred missionaries in the field, and the means are *specially provided* to send them out, this society, being unitedly evangelical and interdenominational, will undertake the responsibility of appointing them. While the society would desire that all missionaries should be physicians, it is aware of the impracticability of such a course; and the need of some limited medical instruction being provided for so-called theological missionaries having been pressed upon the society's attention, a largely practical course of one year has been arranged for. The training thus provided will be such as to enable missionaries to meet any emergency and to treat ordinary cases of disease, such as they often have heretofore been obliged to deal with as best they could, without possessing any medical knowledge whatever.

\$5,700 dollars were expended last year, and it is hoped that \$12,000 will be raised this year, in order that fifty male and twelve female students may be trained.

The founder and medical director edits and publishes a monthly journal called the *Medical Missionary Record*, which is devoted to the interests of medical missions.

The society has under its care twenty students. Two of them went in 1884 to Africa with Bishop Taylor's party. One was medical graduate of a three years' course; the other had not been graduated, but Bishop Taylor was solicitous that he should go. Four are laboring in this country.

I remain, yours respectfully,

JOHN O. CUTTER, M.D.,

In charge of Dispensary No. 3, N. Y. city, International Med. Miss. Soc.,
1730 Broadway, New York.

PERSONALS.

—Dr. Albert Vander Veer, of our publishing committee, has returned to Albany after an absence of about four weeks. He attended the meeting of the American Surgical Association in Washington, D. C., May 11 to 14. The abstract printed in the *ALBANY MEDICAL ANNALS* for May, of his paper entitled "To what Extent can we Classify Vesical Calculi for Operation? with a Report of Cases and Remarks on the Different Methods Employed," read in Washington May 11, was culled from *The Medical Record*, New York, and from *The Medical News*, Philadelphia.

After a stay of five days in Washington, Dr. Vander Veer proceeded to Omaha, Nebraska, as delegate to the General Assembly of the Presbyterian Church. Dr. George Tilden, of Omaha, a graduate of the Albany Medical College, class of '67, has sent our publishing committee the following letter:

OMAHA, NEB., May 25, 1887.

F. C. Curtis, M.D., Albany, N. Y.:

My Dear Doctor—Dr. Vander Veer was here several days, and left the city this morning for Denver.

About twenty five physicians gathered at my house last evening to hear him speak of Lawson Tait, of his hospital, of his doctrines, and of his methods. He gave us a highly instructive and entertaining lecture on this subject, and impressed us all as being an able and brilliant man. Personally he is charming, and a perfect gentleman.

I am prompted to write you this note because we were all so much delighted with him.

Yours truly,

GEORGE TILDEN.

After a visit of a few days in Colorado, Dr. Vander Veer faced eastward, and reached Albany again June 4.

—Dr. Maurice J. Lewi ('77) is lecturer on medical jurisprudence in the Albany Law School.

—Dr. Eugene Van Slyke ('71), of Albany, is enjoying an extended tour of the American continent. He is expected to return about July 10; is now in Los Angeles.

—Dr. Walter M. Fleming ('62), New York city, has removed from 42 West 34th street to 66 Madison avenue.

—"Dr. J. H. Blatner, 132 Hudson avenue, 8-9, 2-3, 6-8," was omitted accidentally from the county society list in May number.

—Dr. William Stevens ('75) has removed to 35 West 38th street, New York city.

—Dr. H. W. Giles ('74), of Albany, was married to Miss Rose Maud Haines, at Trenton, N. J., June 1, 1887.

—Dr. Henry T. Brooks ('87), is located at 103 East 86th street, New York city.

—Dr. M. J. McClellan ('74), of Laurens, Otsego county, N. Y., died suddenly of angina pectoris, May 24, 1887. He was born in Albany, October 26, 1850. He had a very large practice, and had been in usual health. He attended to business on the day he died. On returning home at 11 o'clock in the morning, he complained of slight pain in the region of the heart, and went up stairs and lay upon the bed; when he was called to dinner, he came down stairs, and when about to step upon the floor he was seized with most agonizing pain over the region of the heart, radiating behind the scapula to the head and down the left arm. Medical aid was summoned, and in an hour he was quite comfortable. Twenty-five minutes later he was suddenly taken with another attack, more severe than the first. Two more physicians were called in, but he gradually became comatose at about 4 p. m., and lingered in this condition until 10 o'clock that evening, when he died without a struggle.

—The many friends of Mr. W. F. Teevan, F.R.C.S., late of London, England, but now of Folkestone, Eng., will be pained to learn of his non-improvement in health, having suffered for many years from heart disease. It is beginning to tell very seriously upon his mental condition, and fears are entertained by his family as to his possible recovery.

As a specialist in urinary diseases, he at one time ranked with Sir Henry Thomson, and has left his impress upon the profession in many valuable papers which he contributed during his days of professional work.

—Dr. John Edwards, of Gloversville, president of the Medical Society of the County of Fulton, entertained at his residence about thirty physicians with their wives, on the semi-annual meeting of the medical society, Thursday, June 6. After the transaction of business, a banquet and general good time were enjoyed. Pastor W. M. Brundage and wife were among the invited guests.

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REPORT ON NINE CASES OF PHTHISIS TREATED BY GASEOUS ENEMATA, AFTER BERGEON'S METHOD.

BY FRANKLIN TOWNSEND, M.D., AND J. V. HENNESSY, M.D.,
ALBANY.

[FOR ALBANY MEDICAL ANNALS.]

The cases which are enumerated, though few in number and somewhat incomplete, are deemed worthy of publication, as showing, at least to the minds of the writers, that this method of treatment seems as much of a failure in this dreaded malady as are others equally highly advocated at the present day. Most of the cases were tubercular in character, as will be seen from the following:

CASE I.—Mr. W.; April 11, 1887; tubercular phthisis. Condition: Tubercular laryngitis; somewhat emaciated, coughing frequently; sputa muco-purulent; anorexia; tongue coated; anxious, despondent. Physical signs: Apices of right and left lung softened, second stage, well advanced; middle lobe, right side, also softened in spots. Peri-bronchitis right lower lobe; respiratory sounds harsh and jerking in character. Left lower lobe, first stage. Temperature 4 P. M., 102 2-5°, pulse 102, resp. 30; anxious.

April 23, noon, gaseous enemata begun. Before giving gas, temp. 100 2-5°, pulse 96, resp. 30. After gas, which was given

for one-half hour, bagful: Temp. 100 2-5°, pulse 84, resp. 36; slight colic, tendency to stool. No reaction with lead acetate from expired air.

April 23, 5 P. M. Patient has been up and dressed; says that he notices no particular difference in his feelings. Before gas, temp. 101 2-5°, pulse 90, resp. 24; after gas (three-quarters bagful, one-half hour giving), temp. 102, pulse 84, resp. 36. Desired to stool constantly during administration of gas; made him nervous and uncomfortable; some colic. No result with lead test.

April 24, noon. Again saw patient, who says that at 7 o'clock of the previous evening his temperature was 103°; also had vomited twice, and his night was miserable, coughing incessantly; despondent. Before gas, temp. 100 2-5°, pulse 94, resp. 24; after gas, temp. 100 1-5°, pulse 90, resp. 30. Gas consumed, three-quarters bagful; time, twenty-five minutes.

April 24, 5 P. M. Has remained about the same since morning visit. Before gas, temp. 102 1-5°, pulse 94, resp. 30; after gas, temp. 101 2-5°; pulse 84, resp. 42.

At the above sittings, spring sulphur water was used alone. This last time powder of sulphide of soda and salt, five grains of each, used in wash bottle, were added to the spring water. Colic; desire to stool; no result with lead test. Bagful used; time, one-half hour.

April 25, 10:15 A. M. Poor night, coughing and vomiting; feeling badly. Before gas, temp. 100 2-5°, pulse 102, resp. 27; after gas, temp. 100 2-5°; pulse 94; resp. 42. Spring water and one powder of sulphide of soda and salt used. Cramps; desire to stool; no lead test.

April 25, 4:30 P. M. About the same. Before gas, temp. 100 1-5°, pulse 78, resp. 24; after gas, temp. 100°; pulse 84; resp. 33. Spring water and two powders in wash bottle; two-thirds bagful; no lead test.

April 26, 10:15 A. M. Cramps during night, possibly due to trial of CO₂, taken from iron flask charged purposely and presumed to be pure. Before gas, temp. 99 4-5°, pulse 96, resp. 27; after gas, temp. 99 4-5°, pulse 90, resp. 36. No cramps; bag two-thirds full; twenty-two minutes; no lead test.

April 26, 5 P. M. Before gas, temp. 100 2-5°, pulse 90, resp. 24; after gas, temp. 101 4-5°, pulse 96, resp. 30. Cramps; desire to stool; bagful used; one-half hour; no lead test. Thinks he feels better.

April 27, noon. Slight cramps during night; slept poorly. Before gas, temp. 99 3-5°, pulse 90, resp. 27; after gas, temp. 99°, pulse 84, resp. 32. Spring water, one powder, twenty minutes, bag three-quarters full; cramps and sweating; no test with lead.

April 27, 5 P. M. Has been nervous and generally miserable; almost complete anorexia; despondent since morning visit. Before gas, temp. 102°, pulse 96, resp. 27; after gas, temp. 102°, pulse 108, resp. 36. Complained greatly of griping pains. Mixture used same as above; no test with lead.

April 28. About the same as on the 27th, except patient vomited.

April 29. About the same as on the 27th and 28th. No vomiting. Was compelled to use morphine for cough and sleeplessness. From this date chloral hydrat., gr. xv, were used per rectum nightly; indicated imperatively.

April 30, A. M. Patient says that for the first time since we began the treatment he has slept well, probably from the $\frac{1}{4}$ gr. of morphia given. Before gas, temp. 99 4-5°, pulse 90, resp. 23; after gas, temp. 98 4-5°; pulse 80; resp. 36. No colic; feeling better.

April 30 P. M. Before gas, temperature 101 3-5°, pulse 102, resp. 30; after gas, temp. 101 2-5°, pulse 98, resp. 42. Colic, nausea, coughing; ordered morphine, gr. $\frac{1}{4}$.

It seems needless for us to continue in detail, day after day, the results of this treatment. Suffice it to say that for three weeks more was this poor sufferer made to undergo its trials, simply because of his and our hope that "pretty soon" a marked change for the better would come. It *never* came, and after this period, therefore, we felt warranted to discontinue it absolutely. The last of May it was stopped, and the gentleman died on the 20th of June, not quite one month later, not because of the want of this treatment either.

With reference to it and its results in *this* case, we can only say that at *no* time was there the slightest evidence of any permanent good accruing from it. Beyond an unimportant lowering of the temperature and pulse rate nothing was gained, unless it were disappointment to us and great discomfort to the patient.

CASE II.—Mr. X. Phthisis catarrhalis, first and second stages, three years' standing. April 23, examined patient. Nervous, excitable temperament. Respirations rapid on slightest exer-

tion. Temp. 99°, pulse 90, resp. 36. All organs normal, except both lungs. Emaciated and anæmic. Appetite good; bowels regular. Happy disposition; feels that there is no serious trouble, and as he expresses it, "Could I only clear this mucus from my throat, which makes me cough, and if I were not so short of breath, why, I would be all right."

April 25, 11:30 A. M., began treatment by gaseous enemata. Patient excited. Before gas, temp. normal, pulse 84, resp. 26; after gas, temp. normal, pulse 84, resp. 42. Patient states that cramps in abdomen were severe during administration of gas. Could only use half a bagful; time, fifteen minutes. No reaction with lead by exhalation.

April 25, 5:45 P. M. Patient says that he has been "horribly distended ever since this morning, having cramps constantly." Before gas (from iron flask), temp. normal, pulse 84, resp. 26; after gas, temp. normal, pulse 84, resp. 42. One-half bagful used; great irritability of patient; no lead test.

April 26, 11:30 A. M. States that he had cramps, with a desire to stool, for a number of hours last evening. All gone at present time. Before gas (homemade according to Dr. Solis Cohen's article in *Medical News*), temp. normal, pulse 84, resp. 24; after gas, temp. normal, pulse 72, resp. 42. Gripping but slight, desire to stool, cough no better, expectoration about the same. Patient does not seem to enjoy the treatment.

April 26, 5 P. M. Before gas, temp. normal, pulse 78, resp. 30; after gas temp. normal, pulse 84, resp. 36. Time consumed in giving half bagful, twenty-five minutes. Cramps were frequent and severe for two hours following this treatment.

April 27, 11 A. M. Temp. normal. Before gas, pulse 72, resp. 30; after gas, pulse 84, resp. 36.

April 27, 5 P. M. Before gas, temp. normal; pulse 72, resp. 30; after gas, pulse 84, resp. 36.

From this date the patient administered the gas himself for about one month, when he left the city to spend a portion of the summer in the North Woods. A short time before his departure he stated that he could find no apparent benefit from it; if any thing, it appeared to make him worse.

CASE III.—James C. Tubercular phthisis. Treated at St. Peter's Hospital. Cavities at apex of left lung; second stage throughout upper and lower lobes. Right apex also in second stage. This patient received the treatment for only four days.

The only effect apparent was an increase of pulse-rate and *rise* of temperature. At the end of this time he refused to stand the treatment any longer; would sooner leave the hospital than continue it, because of the exhaustion and great abdominal pain it caused.

CASE IV.—Miss M. K. Phthisis tuberculosis of one year's standing. Family history poor, as patient states that she has had one brother and a sister who died of consumption. Parents living and well, though old. Physical examination reveals small cavity near apex of right lung; second stage in upper lobe of right side anteriorly. Respiration 36, pulse feeble, 90, temperature at 8 P. M. 102°. Coughing and raising muco-purulent matter; sweating profusely nights; very weak.

Treatment *à la* Bergeon began at her home May 20, 1887. Continued unremittingly for three weeks. No permanent change for the better during its administration. Patient greatly annoyed by it from colic, anorexia, vomiting and, in this case, more or less diarrhœa, apparently due to the irritation caused by the frequent rectal introduction of vulcanite tube. It was therefore given up and other modes more commonly in use begun.

CASE V.—Miss B. Tubercular phthisis. Visited office June 3. In many respects this case resembled Case I., except that the disease had not made such progress. Her illness dated from November of last year, when she "caught cold." Her mother died of consumption, she thinks.

Began Bergeon's treatment at her home June 4, continuing it for ten days, with such distress and inconvenience to patient, and without the slightest apparent benefit, that, at her request, it was discontinued, and she was put upon "Bartholow's treatment" for this disease.

Beside these cases, four others have come under the observation of the writers, in three of which they personally superintended the administration of the gaseous enemata, the fourth being a case of Dr. Brown's, of West Albany, which case Dr. Townsend saw only once in consultation, and in which Dr. Brown carefully and accurately made observations regarding this method of treatment, which he used.

In brief, it may be stated with reference to all *these* cases, that, after a fair trial of from two to four weeks of this novel method, it was deemed expedient and proper that it be discontinued, for two admirable reasons, we thought. First, it cer-

tainly did no permanent—indeed, we may almost safely say, not even transient—good; while, second, it was most disagreeable and annoying to the patients, who generally were the first to suggest, or even beg for, its withdrawal.

AN INTERESTING CASE OF ATRESIA VAGINÆ.¹

BY FRANKLIN TOWNSEND, M.D., ALBANY,
Professor of Physiology, Albany Medical College.

Mrs. X., aged 36 years, married, one child; no abortions nor premature deliveries. Time since last pregnancy, eight years. Menstruated last May 12, 1886. Saw patient for first time on May 20th, 1886, when she stated that she had been miserable since giving birth to her child, now eight years ago, up to which time she had enjoyed good health. She had been married eleven months when her baby was born, which was on the 21st of September, 1878. Her labor was exceedingly prolonged and tedious, lasting from a Wednesday at 2 P. M. until the following Saturday, on which day she was delivered of a large, dead male child at 12 o'clock noon, forceps being used. Her perineum was severely lacerated down to the sphincter ani. She remained in bed three weeks, and now presumes that her troubles dated from this prolonged and difficult labor.

Her present condition, as regards menstruation, is: First, it recurs regularly; second, its character seems natural; third, the amount is scanty; and, fourth, it is not accompanied by pain. She has no leucorrhœa, but does have pain, which is intermenstrual, of dull, heavy, bearing-down character, generally not severe, though at times "intense," not influenced materially by position of body nor by walking. Patient states, also, that for months after the birth of her child she found great soreness and tenderness about her privates, which were sadly increased by walking, and at *this* time she had great pain at each menstrual epoch.

On examination by touch, the following condition was ascertained: First, ruptured perineum; second, occlusion of vagina, which seemed to the finger to be absolute; third, recto-abdominal

¹ Read before the Medical Society of the County of Albany, Wednesday evening, January 26, 1887.

bimanual examination revealed the uterus drawn well over to the left side of pelvis, oblique in position. Unable to use speculum until after dilating vagina. I was enabled, after a long search, to pass a probe through a most minute hole in cicatricial tissue of vagina, but this was only accomplished some days later, when patient visited me, as advised, during her menstrual flow, and at which time the menstrual blood was seen oozing through this same opening.

In this case it was therefore simple to be able to diagnosticate atresia vaginæ, almost absolute, due, no doubt, to retarded labor, where sloughing of soft vaginal walls followed because of pressure of advancing head of child, and, where the denuded vaginal walls came together, union became almost complete. Following the inflammation about the vagina came the pelvic peritonitis, which in time fixed the uterus as has already been described.

The treatment was immediately begun by those measures most likely to overcome the fibrinous vaginal barrier, as by dilating, stretching with the fingers, at times cutting with scissors and knife, etc. In time—for there were many sittings—I managed to clear away all fibrous attachments and barriers to a point behind and beyond which proved to be a sacculated portion of the vagina. As was remarked, instead of doing the whole operation at once, I deemed it wiser to take time, working my way very gradually, always using the vaginal plug of vulcanite, of varying sizes, keeping the parts thereby constantly separated, and allowing them to cicatrize slowly and surely. When, in time, a small bivalve speculum could be inserted, I found the cervix uteri well drawn to the left pelvic side and firmly attached to the left vaginal fornix; in fact, it all seemed of one part. I then carefully dissected the cervix from the vaginal wall, interposing, daily, cotton saturated with iodoform in glycerine. When the surfaces (vaginal wall and vaginal cervix) were quite healed, I had the patient use twice daily vaginal douches of hot water (115° F.), always reinserting vaginal plug after using them. This plug could always be kept in position by patient's using a folded napkin. By the use of the above measures constantly, as well as blisters, the oleate of mercury, Barnes' plaster of blue mass applied to the abdominal pelvic region, and by diligently plying her with iodide of potash and tonics, I at last was able to feel the uterus mobile and free from its investment of lymph exudation, the vagina patent and healed nicely, menstrua-

tion *free* and normal, no pain whatever at *any time*, all nervous phenomena—and there had been many—had vanished, and the patient had become a well woman.

The above illustrates well, I think, the importance of delivering all cases of women in labor within a reasonable period; at all events, those cases where the second stage is at its height, and where the head of child is causing pressure to soft parts. Besides, it is well to remember that at *this* time the governing influence of the cerebro-spinal system is paramount, and after a few hours quickly exhausts itself and patient.

Also, in such a case as cited, it seems to the writer that *gradual* dilatation of the atresic condition had its advantages over the usual method of performing the operation as one sitting.

And, again, a noticeable feature in this case was the reflex nervous irritability manifested by patient while suffering with the atresic condition, the relief of which quickly dissipated all such symptoms.

TEETHING: IS IT A COMMON CAUSE OF DISORDER?¹

BY SELWYN A. RUSSELL, M.D., ALBANY.

(ALBANY MEDICAL COLLEGE, 1877.)

It is the belief of mothers almost universally that most disorders of children are due to teething; this belief is, very unfortunately, too common among physicians. On the contrary, it is the belief almost unanimously of experienced specialists who devote themselves to the treatment of children's diseases in America and abroad, and whose books are authority with the profession everywhere, that teething is rarely the cause of children's disorders, and, as a rule, the cause of none. The object of my remarks this evening is to show the mistake that is daily made, by the profession as well as the laity, in allowing the so-called teething-disorders to go on without treatment till a stage is reached in which the health, and perhaps the life, is in jeopardy. For example, every mother says of her child's diarrhœa that it is a sort of mysterious vent by which is thrown off a mysterious something that would otherwise "go to the brain,"

¹ Read before the Medical Society of the County of Albany, Wednesday evening, March 9, 1887.

and cause disturbance there; and she not only feels sure that the baby's health is protected by this disorder, but is equally sure that without it other more serious disorders would supervene; so she makes no effort to check it. From the sixth month to the twenty-fourth, loosely speaking, the child is cutting its teeth, so that every ailment that occurs during that period will most likely coincide with symptoms of teething. The physician is of course anxious to assign a cause to every disorder, and as he knows the mother's prejudice in favor of teething, and being himself averse to careful physical examination of the child, he yields to the mother's bias, says the child is teething, therefore the disorder. How often have serious affections been thus overlooked and the symptoms misinterpreted or altogether ignored!

If a disease is to be considered as a consequence of teething, it must not simply now and then coincide with the cutting of a tooth, but the coincidence should be exact as to time, and repeated, if not with every tooth, at least frequently. We cannot consider any thing the sure cause of an effect so long as another cause is equally probable. As our knowledge of the causes of disease in children has increased, the importance of teething as a cause has decreased, and we now reject many of the alleged effects of teething that physicians formerly admitted. The chief difficulty arises from ascribing to teething disorders due to other causes, which might have been easily removed at the outset.

If any disorder exist, supposed to be caused by teething, it is inferred that the child is teething, whether it is or not. So the parents are confused, the physician himself being in many instances to blame.

Some disturbances of the digestive system, some nervous disorders, eruptions on the skin, etc., it is known, are occasionally due to teething.

The difference of opinion as to the importance of teething as a cause of disease is not a simple dispute of terms, but one which has a real interest in the nursery. If the parents believe that teething causes all the ailments attributed to it, they are, as is daily seen, likely to regard the ailments as nearly, if not quite as much, a matter of course as the natural teething process, and they consider it useless to try to cure them until teething is complete. As a result of these errors and confusions, it too frequently happens that disorders very tractable at the outset are

allowed to progress unopposed until they reach a serious stage. On the contrary, if we assume that teething is rarely the real cause of disease, the parents will seek some other cause for any disturbance that may be present, and endeavor to remove it. (Yale).

With these few prefatory remarks I beg to read to you quotations from the best authorities on this question, which are taken sometimes from the chapters on dentition, sometimes from chapters on diarrhœa, enteritis, eclampsia, etc. The quotations first given are from authorities who regard teething as a common cause of disorder; following these will be found authorities, as a rule better known, and in the large majority, who look upon teething as a physiological process rarely if ever giving rise to disorders.

Meigs and Pepper, seventh edition, page 412, say: "Dentition may be mentioned as exerting a strong influence in the causation of enterocolitis. That the evolution of the teeth, though a physiological process, is a powerful predisposing cause of diarrhœa and enteritis, cannot be doubted at the present time."

Speaking of cholera infantum, they say: "We believe dentition to be a most powerful predisposing cause of this disease, and yet it is less influential than age, for vital statistics show that it is about twice as fatal in the first year as in the second, though the process of dentition is certainly more active and continuous in the second than in the first year. We have rarely observed it before the beginning of the process of dentition, and it is certainly very rare after its completion.

They also say that it is a frequent cause of laryngismus stridulus. The age at which it occurs most frequently, the age from six to eighteen months, the very period during which the process of dentition is most active, would alone go far to show that this must constitute one of the most powerful predisposing, if not exciting, causes.

Day, in "Diseases of Children" (1881), page 69, says: "What share teething exerts in causing diarrhœa it is impossible to say; but there is a close connection existing between these states. When diarrhœa is present we do not hastily attempt to check it if the teeth are piercing the gums, and the mouth is uneasy; still, if the drain continues or is excessive, the child becomes exhausted, and the possibility of convulsions must not be overlooked."

Ellis ("Diseases of Childhood"), London, says on page 10: "During dentition the child's health requires unusual care; the bowels must be regulated, the diet strictly attended to, the gums lanced when they are hot and swollen; the diarrhœa of teething is natural, and if in moderation should not be interfered with."

Vogel ("Diseases of Children," page 109) says: "A mild diarrhœa, five or six passages in twenty-four hours, is very beneficial to teething children, for cerebral affections are thereby most surely prevented. It occurs, in fact, as often as catarrhal stomatitis, and both processes might very appropriately be regarded as physiological conditions, if their aggravations, which often attract attention, did not attain to distinct diseases, and really display serious characters." He thinks the excessive quantity of saliva at this time, swallowed by the child, is the cause of diarrhœa.

Dr. Hillier, London, in his book on "Diseases of Children," says: "Until recently nearly all convulsions of infants were ascribed either to teething or to worms; it is very doubtful whether in a healthy child these causes can produce convulsions at all; in a predisposed subject they no doubt often excite them" (page 380).

West, in his "Lectures on the Diseases of Infancy and Childhood," page 507, says: "You will observe that the period of greatest prevalence of diarrhœa coincides exactly with that time during which the process of dentition is going on most actively, and that exactly half of all cases of diarrhœa occurred in children between the ages of six months and two years. So close, indeed, is the connection between teething and diarrhœa that a French physician, M. Bouchat, found that only twenty six out of 138 children entirely escaped its attack during the period of their first dentition, while forty-six suffered from it severely. The older writers on medicine, whose notice this fact did not escape, attributed the disturbance of the bowels to a sort of sympathy between the internal canal and the gums, swollen and irritated by the approach of the teeth to their surface. The frequent observation of cases in which an attack attends the irruption of each fresh tooth, and ceases when it has out through the gum, shows that such an hypothesis is not altogether without foundation. But, besides the influence of nervous irritation in quickening for a time the peristaltic action of the bowels, and thus inducing diarrhœa, it must be borne in mind that there exists during the period of teething a *more abiding cause*, which strongly predisposes to its occurrence. All parts of the digestive canal, and of its dependencies, are now undergoing an active evolution to fit them for the proper assimilation of the varied food on which the child will soon have to subsist. Just as the salivary glands now begin to secrete and pour out saliva in abundance, so the whole glandular system of the intestines assumes a rapidity of growth, and an activity of function, which, under the influence of comparatively slight causes, may pass the just limits of health. In too many instances, causes, fully adequate to excite diarrhœa, are abundantly supplied in the excessive quantity or unsuitable quality of the food which the infant is furnished; for it is forgotten that its condition is one of transi-

tion, in which more than ordinary care is needed, while in accordance with that mistaken humoral pathology so popular among the vulgar, the profuse secretion from the irritated glands is regarded as the result of a kind of safety valve arrangement whereby nature seeks to moderate the constitutional excitement attendant upon teething." * * * Page 451: "Not only do nurses attribute to teething the most varied forms of constitutional disturbance, and mothers express serious apprehension as the period of dentition approaches, but medical men hold forth to anxious parents the expectation that their child will have better health when it has cut all its teeth. The time of teething, too, is in reality one of more than ordinary peril to the child, though why it should be is not always rightly understood. It is a time of most active development of the organism—a time of transition from one mode of being to another, in relation to all those important functions by whose due performance the body is nourished and built up. Statistics prove the dangers of this period, and warrant us in regarding the completion of the process of teething as a fair subject for congratulation.

"The error which has been committed with reference to this matter, not merely by the vulgar, but by members of our own profession also, consists, not in over-rating the hazards of the time when changes so important are being accomplished, but in regarding *only one of the manifestations* (though that, indeed, is the most striking one) of the many important ends which nature is then laboring to bring about. * * * The epoch of dentition is to be looked at just in the same way as that in which we regard the epoch of puberty. Constitutional disturbance is more common, and serious disease more frequent, at those times than at others; but their causes lie deeper than the tooth that irritates the gum that it has not pierced in the one case, or than the uterus which has not yielded the due discharge of blood in the other. You might produce hemorrhage from the uterine vessels in the latter instance, or cut through the gum in the former, with no other effect than that of aggravating the condition of the patient. * * *

"I warn you against looking upon all ailments as symptomatic of the local uneasiness which the child suffers in its mouth. Some persons, indeed, act as if they held this notion to its fullest extent; and following up in practice this coarse, mechanical theory, they lance the gums of every child who has not yet cut all its teeth, almost or altogether irrespective of the nature of the affection from which it suffers. Such a course is nothing better than a piece of empiricism which causes the infant much pain, and is useless or mischievous in a dozen instances for one in which it affords relief. Still less is the gum lancet to be used merely with the view of expediting the process that nature is engaged in. The gradual protrusion of the teeth occasions the slow absorption of the superjacent gum, and for this process the

division of the gum by a scalpel is at best but a clumsy substitute."

Eustace Smith, M.D., London, on "Wasting Diseases of Infants and Children," says: "Many children are said always to cut their teeth with diarrhœa. Perhaps, however, dentition in these cases is not so entirely to blame as is commonly supposed. No doubt, during the cutting of the teeth the bowels generally are in a state of irritability, for we know at these periods the follicular apparatus of the intestines is undergoing considerable development. The bowels then are ripe for diarrhœa; there is increased sensitiveness to the ordinary exciting causes of purging; but without the exciting causes diarrhœa is by no means a necessary result of such a condition of the alimentary canal. We find that looseness of the bowels is more common in summer than in winter; that is, when the changes of temperature are rapid and unexpected.

It is no doubt the case that functional derangements are frequent during teething, but it is often unfair to attribute these directly to the irritation of an advancing tooth. Looseness of the bowels has been looked upon by some as a natural method of relief to the system, and fears have been held out of grave troubles which might ensue if the looseness were too suddenly arrested. Such fears are groundless. *A catarrhal condition of the bowels should be cured as quickly as possible, especially during dentition.*" (Also see Smith in Quain's Dictionary of Medicine.)

Dr. John Cheyne (1802), "Essay on Diseases of Children," says that diarrhœa is often seen in cases where there is no swelling of the gums, no salivation, nor any appearance of pain or tenderness about the mouth, in cases where the child is cutting its teeth easily, and even in children three months old, who have no teeth at all.

Henoch, Berlin (1882), "Lectures on Diseases of Children," page 62, says: "Every physician knows that the most varied disorders of infants are attributed to teething, and are therefore neglected or even regarded as salutary. In the opinion of the majority of physicians, however, teething is a physiological process which cannot give rise to any morbid phenomena. But it is questionable whether this decided negation is always justifiable, and, although fully recognizing the services thus rendered in restricting "teething" diseases, I cannot suppress certain doubts regarding the universality of this view. We know that the perforation of the teeth is due to the fact that the growing root of the tooth gradually presses the crown forward and pushes through the alveolus after perforation of the overlying gum, which grows continually thinner from the increasing pressure. Vomiting, diarrhœa, even spasmodic cough, may disappear, and have done so, when one or more teeth have passed through." As to cutting with the lancet, he says: "It is now very generally held that every attempt to facilitate the eruption of the

teeth, and thus remove the symptoms due to difficult dentition—so called—is absolutely useless. I have, in earlier years, performed scarification with sufficient frequency to convince myself of its entire inutility, and it even appears to me that the cicatrix formed may increase the difficulties connected with the penetration of the tooth.”

Strümpell says: “Nervous disturbances are often referred to dentition. The most frequent symptom of this kind is eclampsia. The attacks are sometimes called ‘teething convulsions.’ Although the laity go too far in ascribing all sorts of nervous disorders to teething, still experienced specialists do recognize the *possibility* of such an origin for many cases.”

In Buck’s “Handbook of the Medical Sciences,” Dr. William H. Flint, New York, writes as follows: “The modern belief that dentition is not the cause of disorders in children has subserved an extremely useful purpose by calling attention to the fact that comparatively few constitutional disturbances are really dependent upon teething, and in doing away with the erroneous belief that the checking of these disorders would exert a harmful effect upon the natural course of dentition.”

J. Lewis Smith, New York, in his book on “Diseases of Infancy and Childhood,” says: “The opinion formerly entertained by the profession, and now prevalent in the community, that many infantile maladies arise directly or indirectly from dentition, is erroneous. Still, there are physicians of experience who believe that teething is a common cause of certain maladies, especially of functional derangements, even of organs remote from the mouth. On the other hand, equally good observers, and the number is increasing, almost wholly ignore the pathological results of dentition. They say that, as it is a strictly physiological process, it should, like other processes of the kind, be excluded from the domain of pathology. * * * Every physician is called now and then to cases of serious disease, inflammatory and other, which have been allowed to run on without treatment, in the belief that the symptoms were the result of dentition. I have known acute meningitis, pneumonitis, and enterocolitis, even with medical attendance, to be overlooked, and the symptoms attributed to teething during the very time when appropriate treatment was most urgently demanded. Many lives are annually lost from enterocolitis, the parents and friends believing the diarrhœa to be symptomatic of dentition, a relief to it, and therefore not to be treated. Such mistakes are traceable to the erroneous doctrine once inculcated in the schools, and still held by many of the laity, that dentition is directly or indirectly a common cause of infantile diseases and derangements. * * * It is certain that in most cases of diarrhœa which are attributed to dentition there are other causes, such as unsuitable food, or bad housing or residence in an unsalubrious locality. It is certain, as regards city infants, that the

chief causes of diarrhœa during the period of dentition are strictly anti-hygienic, dentition being quite subordinate as a cause, and probably ordinarily not operating at all as such. But when, as sometimes happens, at each period of dental evolution, the infant is affected with diarrhœa, the influence of teething is apparent. Such cases enable us to see that teething may really sustain a causative relation to certain diseases not located in the buccal cavity."

Referring to the lancet, he writes that it is much less frequently employed than formerly. It is used more by the ignorant practitioner, who is deficient in the ability to diagnose obscure diseases, than by one of intelligence, who can discern more clearly the true pathological state. "It is well to bear in mind the remark of Trousseau, that the tooth is not released by lancing the gum over the advancing crown. The gum is not rendered tense by pressure of the tooth, as some seem to think, for the incision remains linear, and unites by first intention in a day or two. Thus the effect can often last but a day or more. It may help us to understand how active, how powerful, the process of absorption is, if we reflect that the roots of the first teeth are more or less absorbed by the advancing second set, without much pain or suffering from the pressure. If the calcareous particles of the teeth are so readily absorbed, what is the foundation for the belief that the soft tissue of the gum is absorbed with difficulty? Too much importance has evidently been attached to the supposed tension and resistance of the gum in the process of dentition."

Dr. James F. Goodhart, London, "Diseases of Children" (1885): "Dentition is usually held to be the cause of many ailments, but to what extent it is really so is doubtful. The time of dentition is one of transition. A uniform and bland diet is changing for one of greater variety, and febrile attacks, diarrhœa, vomiting, which are so rife at this time, are more satisfactorily explained by indigestibility of food than by some occult influence of tooth-cutting."

Dr. Carl Gerhardt, Jena (1871), in his "Children's Diseases," says: "As in domestic life and among physicians there is at present very often an inexcusable slighting of children's diseases, because of the possibility of their being caused by teething these are therefore neglected or misinterpreted; hence it is important to know that teething very rarely causes disorder, and the physician should consider the dentition at fault *only after careful examination of the food and nutrition of the child, and after an exact physical examination.* The acceptance of this theory of tooth-irritation does not alter or render unnecessary the usual treatment of the remote disorder. Very often there lies behind the teething faults of nutrition which, misunderstood or ignored, are followed by most serious consequences."

In Gerhardt's book, Vol. I., page 415, Dr. A. Jacobi, of New York, says of summer diarrhœa: "It arises from overfeeding,

heat or bad air, never from teething." Dr. Jacobi has also said that "the alleged relation between teething and disease is, to say the least, a very doubtful one. * * * Nothing is more harmful than overfeeding. A child of one to two months should be nursed every two or three hours; of six months and more, say five times in twenty-four hours, and not more. If a child becomes thirsty between nursing-times, give it water or barley water."

I shall be surprised if it be not the belief of most present that teething is the most frequent cause of children's disorders; but it ill becomes us to be inconsiderate of the opinions of a large majority of those who give their whole time to the investigation and treatment of children's diseases, and these opinions are decidedly against such belief. No one claims that teething may not *exceptionally* cause disturbance, but the exception must not be made the rule. I am satisfied that too great laxity may be charged against the profession generally for ignoring other and more potent causes of disorder and ascribing every thing to teething. When the teeth are making their appearance, other changes are going on which require attention. Toward the close of the first year, not before, the pancreas, like the salivary glands, becomes active, so that, before this time, should starchy foods be given, they would doubtless cause indigestion, diarrhœa, or both. What an error it would be now to attribute to teething, as would most likely be done, this disorder of the digestive system. It is often observed that a correction simply of the errors of diet removes the disorder previously charged to teething. Mothers nurse their children too often, as a rule, and too much at a time, and rarely give them water, so that the baby's stomach obtains no rest day nor night. An adult stomach could not tolerate such abuse; it is not remarkable that the child suffers. So I feel sure that the safer ground is that teething may *exceptionally* cause disturbances, as a rule none.

DISCUSSION.

The paper elicited considerable spirited discussion.

Dr. VANDER VEER thought that teething often caused trouble, and said: When Dr. Russell has carried a child day and night, or been disturbed by another's doing the same, he will be willing enough to believe that teething causes mischief.

Dr. CULVER believed, reasoning from analogy, that teething might exceptionally give rise to disturbances, but, as a general rule, to none.

Dr. WARD remarked: No one claims that teething often causes serious disease, as meningitis, as referred to in the paper, but that it is the frequent

cause of disorders I have no doubt. Saying that it is a physiological process and therefore incapable of causing pain is as absurd as it would be to say that digestion is never painful because physiological. I think good is often done by lancing the gums. A slight diarrhoea will do no harm to a teething child.

Dr. THOMPSON spoke vigorously against the idea that teething is a fruitful cause of children's diseases, as generally believed. He thought lancing of the gums useless, if not actually harmful.

Dr. TOWNSEND believed that teething, like phimosis, might and often did give rise to reflex disturbances. The diarrhoea accompanying teething, no doubt in his mind, was frequently due to reflex irritability of the sympathetic vaso-motor system, where, dilatation of intestinal blood-vessels taking place, transudation of serum naturally followed. The same may be said with reference to such dilatation of blood vessels in the brain; here transudation of serum frequently fills the ventricles, with its concomitant results.

Dr. M. J. LEWIS could easily believe that teething gave rise to disorders, from the fact that adults suffer so much sometimes when cutting the wisdom teeth.

Dr. BARTLETT was of the opinion that only exceptionally was teething a cause of disorder. As he understood the paper, it was not a denial that teething might rarely cause disorder, but a plea for discrimination among causes, and a protest against the too common habit of physicians of siding at once with mothers and nurses in favor of such idea, rather than to examine further for adequate cause.

Dr. RUSSELL, in reply to the criticisms, said: As babies often cry most and are carried most before they begin to cut teeth at all, that argument is not convincing.

It is amusing to see Dr. Ward set up a straw man in order to knock him down. No mention was made in the paper of meningitis as due to teething. He says that teething is fairly comparable with digestion in the matter of pain. Digestion does not cause pain; indigestion causes pain.

It may be said, in reply to Dr. Townsend, that in phimosis there is really what acts as a foreign body causing irritation—a substance that may cause irritation in the adult as well.

As to the pain attending the cutting of the wisdom teeth, it is caused chiefly by biting hard substances against the gum, and this same pain may be experienced when the gum grows over an old root.

CALCINED OYSTER-SHELLS FOR CANCER.—Dr. Peter Hood, London (*Lancet*), reported a cure of supposed scirrhus about twenty years ago, and now adds another reported cure, following the use of calcined oyster-shell. "As much as would lie on a shilling" was taken once or twice a day in a little warm water or tea.—*N. Y. Med. Journal*.

DIET IN CANCER.
FIRST PAPER—FULL TEXT OF NINE CASES.

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[FOR ALBANY MEDICAL ANNALS.]

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PRELUDE.

This paper is intended to be practical, giving histories of some cases where there were special diets adopted which seemed to be beneficial. It is offered as a contribution to medical knowledge to point out the way in which the writer thinks that organic disease should be approached—that is, through the *function of nutrition*; to show that alimentation is an agent of tremendous power, and to impress the idea that diseased tissues are sometimes amenable to food-influences even in apparently desperate instances. In a second paper the theoretical side of the question will be considered.

CASES.

CASE I.—*Diet of Bread and Milk; Cure.*

In the memoir of the late Dr. Amos Twitchell, of Keene, N. H., by Dr. H. I. Bowditch, Boston, 1851, we find the following account of his case:

"1. Cancer had appeared in his family. His grandmother died of cancer of the breast; his sister died of that of the stomach. These are all the data of his hereditary tendencies that bear upon our main topic.

"2. In very early life Dr. Twitchell was in delicate health. As a youth he was stronger, and was among the foremost in all athletic sports. While at college he became dyspeptic, had jaundice, etc., and subsequently he passed gall-stones. Whilst pursuing the studies of his profession, he began to suffer from asthma, and for about twenty years was very much subject to violent attacks of it, causing him during the winter to sit up in bed half of every night. During all this period he ate animal food freely, three times a day, and digested it with ease, whereas vegetable food caused dyspeptic difficulties. Being induced, owing to a severe eruption of the face, to abandon this course, he gave up, for nine years, the use of meat. After some months his face was cured; and from the period at which he first abandoned meat he never had an attack of asthma, and Dr. Twitchell considered these two facts related to each other as cause and

effect. Moreover, vegetable food was soon easily borne. After the nine years of vegetable regimen, he began gradually to resume the milder kinds of animal food, such as poultry and somewhat more of the solid meats, until two years since (1847), when he commenced the very rigid diet to be described when treating of the local disease which is the more immediate object of this paper. Finally, I will state, as indicative perhaps of the tendencies of the cutaneous system to morbid action, that about four years ago he had a papular eruption lasting six weeks, and likewise that very many years ago he had a wart-like tumor on the scalp, which disappeared under the use of creasote externally applied.

"3. The local disease, the course and result of which I present as the chief object of interest, commenced eight or ten years since as a small but hard tumor at the internal angle of the right eye. When first noticed, it was about as large as a mustard seed, and not painful. He occasionally touched it, and had some suspicion that it might eventually prove of a malignant character. It was imbedded in the substance of the skin, and from the first seemed very slowly to augment in size. At times he thought he felt some lancinating pains in it which radiated to the brow. It did not, however, interfere with the functions of the lachrymal ducts, etc. About 1843 the tumor had become nearly as large as a pea, and a tendency to the formation of a scab was observed. He was then induced to try some local applications, and frequently, until 1845, used Jennings's ointment. This would remove the scab and display three small lobes, from which exuded a little purulent fluid. At first the morbid growth seemed lessened by this and other milder applications, but no permanent effect was produced. At times the discharge ceased, but only to return again, and the tumor gradually lost its trilobed aspect. It was at this period quite conspicuous to every bystander.

"August, 1845—Dr. George Hayward, of this city, removed it with the scalpel. For a short time the wound seemed doing well, but finally it did not heal, and two months afterwards it was operated on again, and nitrate of silver was applied. Meanwhile, however, much local pain had been experienced. It was deeper seated, less transitory, and radiated towards the brow and cheek. Sometimes it was severe enough to waken him at night, and worse usually after long journeys.

"The applications during 1846-7 were chiefly of a very similar character—cold cream, preparations of zinc, etc., and once the iodide of lead. All active applications caused inflammation of the eye. The tumor continued to augment slightly, and in the spring of 1847 it presented to my eye a decidedly malignant appearance. It was an ulcer about the size of the top of the finger, with ragged, hard, elevated edges; and the irritation from discharge caused the patient frequently to apply his hand-

kerchief to the part. At night it caused a gluing of the lids and a discharge at the side of the nose. I certainly believed, and Dr. Twitchell tells me that he thought, at the time, that the disease would gradually augment and involve the eye, and he had determined, if necessary, to have this organ extirpated. His general health, as it has been already stated, continued good; but, when not actively employed, the mind was somewhat depressed at the prospect before him. At the meeting of the American Medical Association in Philadelphia, May, 1847, he consulted several of the eminent men whom he met, and I believe, I may say, that all regarded it as a disease of a more serious nature, although some thought it might be cured by local applications, and others advised a further operation.

"Dr. Twitchell returned home discouraged, and he decided to give up all use of medicines internally, or of external applications, but to try a course of the most rigid diet. Starting from a theory that malignant diseases arise from the fact that we take too much carbon into our systems, he determined to live from that time upon a bread-and-milk diet; and if, at the end of some months, he did not find any diminution in the disease, he intended to use nothing but bread and water. After his return from Philadelphia he adhered strictly to the bread and milk. He used three times daily from four to six ounces of cream, or the richest milk, and same quantity of either white or brown bread. He continues that diet still (1849).

"The results upon the local disease were the following: The pains in the part were lessened almost immediately. The purulent discharge very soon began to diminish, and in two or three months it was evident that the disease was not augmenting. During the following winter the improvement was more decided. In the spring of 1848, being obliged to ride over dusty roads to great distances, the eye was more irritated. Nevertheless, he felt, and his friends assured him, that the diseased part was really lessening and tending towards a cure. After that period a steady improvement took place. The ulcerated mass, which was so perceptible to me two years since, has wholly gone; and now (August, 1849) I can discover no difference between the angles of the two eyes, save that in the right one there is a minute white spot, about a line in diameter, looking like a scar. It is not harder than the adjacent parts; and had I not known of the existence of previous disease, I should not have noticed even this. There is no discharge, no pain, and a perfect cure seems to have been accomplished of a disease that had been existing for about ten years, in a patient aged sixty-eight years.

"The effects of this rigid diet on the constitution, as a whole, are interesting.

"Respecting his mental condition, Dr. Twitchell thinks he is much less irritable than when he was omnivorous.

"He had, at one time, an attack of vertigo (to which, however, he has been always liable), and finding that he was growing corpulent under the diet, he for a time took less of it.

"He has always been as strong as when indulging in a more generous diet.

"He has been able to breathe better.

"His digestion has been good, but with a slight tendency to costiveness.

"His organs of circulation have been unaffected.

"Renal excretion for years a little disturbed, as is not unfrequently the case in persons of his age.

"Finally, Dr. Twitchell presents, to my mind, the picture of a hale, robust man, in perfect health, so far as one can perceive, and but slightly touched by the influence of his many years of honorable and successful labor.

"Reflections upon Dr. Twitchell's case:

"1. The most important topic involved in the foregoing record is the restoration to health from what seemed to be malignant disease, and that this result followed the strict diet of bread and milk for two years.

"2. The cessation of asthmatic difficulties, after they had troubled the patient for twenty years, and that this cure likewise followed the change of diet from an almost strictly animal diet to one quite the reverse, viz., strictly vegetable." [Is milk vegetable food?]

"3. Some readers may ask if these two cures (see following case) are not merely examples of the *post hoc*, and they may deny that there is any complete evidence of the *propter hoc*. I consent to the doubt, for it has entered my own mind. Nevertheless, if mere coincidences, they are pregnant with important suggestions. I confess that, in my own practice, I have never met any cases so significant of the power which diet, simply and heroically used, has to reorganize a man.

"4. Dr. Twitchell's case becomes interesting as an evidence of the power of a man to subject his body to strict rule. In this epicurean age it is quite refreshing to find one who 'eats to live, and does not live to eat.' A worthy professional brother of this city said, when the case was related to him: 'It might certainly be a question whether life were desirable under such a regimen.' I honor a hero wherever I find him; and the heroism of Dr. Twitchell in undertaking and pursuing this course, merely in consequence of a theory, excites in me the greatest delight. In this skeptical, unbelieving era, I delight to see any one having faith. Whether the theory was correct or not, it matters little; the fixed will of its follower arouses my enthusiasm; and this brings me to another topic of interest.

"5. The theory which governed Dr. Twitchell—was it correct? I confess that I am unable to solve the question; I merely suggest it. Some, whom I consider as our ablest chemists, think it

was by the process of starvation, as described by Liebig, that the cure was wrought. It seems to me that this cannot be the true explanation, for Dr. Twitchell has always been stout; and it will be remembered that at one time he actually gained flesh under the diet."

CASE II.—*Diet of Bread; Infusion of "Water Dock"; Cure.*

"Dr. W. H. Thayer, in a letter to me, says:

"I have obtained from Dr. Twitchell all the particulars of the case of treatment of osteo-sarcoma which he could give me; and as his memory is so accurate, I suppose he has not forgotten any thing of importance connected with it. You know the doctor never takes notes.

"A man about forty years of age consulted Dr. Twitchell in relation to a tumor on his scapula, as large as a pint bowl. It was evidently osteo-sarcoma, had its usual crackling feel, and resembled very closely one in the same position which Dr. Twitchell had seen a short time previously, and for which he had removed the whole upper extremity, even scapula and clavicle. In that case the wound healed, but the man died a year or two afterwards with carcinoma of some internal organ. When the second case applied for advice, Dr. Twitchell declined an operation, and the man returned home to Vermont. Soon afterwards he heard of somebody in New York who could cure him, and, applying to this person for advice, received the following:

"He was to take from the brook which ran through his native farm a plant which grew there (the adviser did not say what it would be), and use a weak infusion of it for his only drink every day until the tumor had disappeared. His diet, besides this, was to consist of bread alone. This advice was strictly followed; the plant he used was 'water dock.' Dr. Twitchell happened to see the man two years afterwards, when he was still following this course. He found the tumor had nearly disappeared, there being apparently only a trifling thickening of the skin.'

"These two histories must be deeply interesting to all. Presenting, as they do, the evidence of the powerful influences of diet upon the well-being of man, they are of great importance. I should not wish, however, to make the inference which some may be disposed to draw, that they prove the propriety of an almost strictly vegetable diet for all. They simply suggest that a long-continued mild and spare diet may cure when other remedies are of no avail. I am likewise well aware that, under the modern revelations given by the microscope in regard to the nature of tumors, some may doubt as to the malignant character of Dr. Twitchell's disease. Whether it be malignant or not, I am satisfied of the truth of the following proposition: Dr.

Twitchell had a disease thought to be of a malignant character by the most eminent of the profession, one of whom had once extirpated it; it had continued to augment for eight years in spite of local treatment; and, finally, under a strict diet it began to lessen in severity, and, after a gradual improvement for a year, was wholly cured."

Dr. Bowditch writes that his practice has not embraced like experiences. Mine has. I have met with like fortitude and heroism in diet, and cannot call this age entirely epicurean.

It should be said in passing that the following cases were treated with the intention to combat the disease on grounds to be stated further on.

CASE III.—Diet of Animal Food, Tea and Coffee; Cure.

Near Boston resides a middle-aged widow, several members of whose family died of cancer. One of them was a maternal uncle whom the writer attended in his last sickness, and made the autopsy. White, hard, distinct, globar collections of heterologous growths were found in the substance of the walls of the left ventricle of the heart, of the parenchyma of the liver, and of the top of the skull. Before death he used to say that he had horns growing out of his head. Spheroidal protuberances were found in the hair just above the forehead, one on each side, and one or two more back of them. At first they were thought to be atheromatous tumors, but their fixedness and rigid immobility, while the scalp moved over them, dissipated this idea. They certainly appeared, as the man said, like the budding horns of a calf. A careful dissection after death showed the growths to be white, shiny, hard, spherical tumors (schirrhous), three-fourths of an inch in diameter, resting on the dura mater. After scooping them out, there appeared well-defined, circular, clean-cut holes, passing through the outer table, the intertabular substance and the inner table of the cranium, as if they had been cut with a trephine.

Mrs. B., the niece of this case, had been separated for nine years from her husband by her parents, as he was an idler and would not support his family. His wife loved him, and this forced parting greatly depressed her mind. Besides, she had retroversion of the uterus. The posterior insertion of the vagina on to the uterus was the highest up of any case known to the writer, to wit, at or near the fundus. In 1876, Mrs. B. was worse. She was laboring under great mental depression from hearing that her husband was a great sufferer in Colorado. On vaginal examination, several hard, round tumors, somewhat matted together, were found behind the uterus. Similar, but smaller, growths were found in the enlarged cervix uteri. There were some unhealthy vaginal discharges, but they were not

bloody. There was some pain, but not excruciating. The countenance had a cachectic look. There was great nervous prostration. Little emaciation. The Cutter retroversion pessary, which she had worn, could not be borne. Her treatment consisted of gentle laxatives, of tonics, as iron and quinine, and of a food of carefully selected beefsteak varied with other animal food. Vegetable food was excluded, save tea and coffee. This course she faithfully carried out, over six months after her husband's death, with these results: The suspicious growths disappeared; she was able to wear her retroversion pessary, and at the present time she is living in the enjoyment of her usual health, with no reappearance of the growths.

I am quite ready to have a doubt thrown on my diagnosis, because of the recovery, and I will not say I could not be mistaken; but had the lady died, no one would have doubted. Perhaps our nosologies are at fault. Perhaps, also, my medical education is at fault; but if an average medical student faithfully avails himself of a four years' pupilage in regularly chartered medical colleges, it is a hard case indeed for his instructors if they could not teach him how to diagnosticate a case of cancer of the womb.

CASE IV.—Diet of Animal Food; Opium Stopped; Iodoform Locally; Tonics and Sponge Baths of Ammonia; Great Improvement. Discontinuance of Treatment; Opium Resumed; Death.

Mrs. F., aged about fifty years, resided in Louisiana. In the summer of that year she applied to me for what had been diagnosed as "cancer of the uterus" by her local physician and by an eminent medical authority living in New Orleans. Both gave her no hope from any treatment, and she was taking opium for relief of her pains. Physique good, though there were bloody vaginal discharges, attended with pains more or less severe. Intervals of no pain sometimes occurred. Appetite good. Found the uterine cavity normal in depth, but dense. The cervix was enlarged laterally even to the side of the pelvis, ragged, rough, dog-bitten and bleeding, not stony in feel, but rather punky to the touch. Just before this trouble came, one year previous she was a subject of intense and unrelievable domestic mental difficulty on account of the actions of a relative, which shattered her nerves and made her almost distracted.

She was put on an exclusive animal food diet, varying from one article to another as she cloyed of one or another, but eating mostly beef unchopped. Twice and thrice a week the cervix uteri was literally buried in powdered iodoform, which was retained by absorbent cotton in the vagina. Some simple tonics, sponge baths of ammonia, visiting in different New England

health resorts, and quinine and iron were prescribed. The use of opium was stopped. The effect of the treatment was like magic. The pains, the bloody flow and the discharges ceased at once. The cervix showed less redness, thickening and angriness of look. In the course of three months the ulcerative appearances had nearly disappeared. She thought herself cured enough to return home and to manage her case herself. Certainly the situation, so far as signs, symptoms and feeling were concerned, coincided with her opinion, but not with mine. Against my best judgment she left. She was most strictly enjoined to continue baths and diet and have her physician apply the iodoform if there was any reappearance of the disease. But these instructions were disregarded, and soon after her return home she grew worse, resumed the opiates for the annulling of pain, and after nine months died of cancer of the uterus.

Had this case recovered I suppose it would have upset the diagnosis in the minds of some. Still, it is valuable, by showing what diet, with judicious treatment, can do in the arrest of the progress of a well-authenticated case.

It shows also the necessity of keeping one's hold of a patient till thoroughly cured. Those who advocate "evolution of savages by degradation" can find many arguments for their position in the facts of the practice of medicine. It is easier for medical cases to run to "*devolution*" than to "*evolution*."

CASE V.—Cancer Carpal Bones and Adjacent Tissues, with Axillary Complications. Diet of Unchopped Beef, Tea and Coffee; Amputation at Middle Third of Fore-arm; Disease in Axilla Quiescent.

In June, 1882, I saw at Vineland, New Jersey, for the first time, Mr. E. B. Osgood. He was suffering from a trouble in the palm and back of his right hand, which, in his occupation as shoe cutter, he used all the time, and more than the left hand. Family have no taint of cancer. His hand had troubled him for thirteen months, and was much swollen and open on the dorsal surface. A probe introduced through the openings showed the carpal bones necrosed. On the under surface of the wrist was a curious volcanic-looking swelling, with an opening at the apex. It was about one inch and a half in diameter and one inch high. It almost touched the palm. It was boggy in feel and discharged pus. Did not look like a boil, but was malignant in appearance. There were in the right axilla several enlarged, stony lymphatic glands, more or less fixed, some of which had fistulous openings and were discharging a curious flow, which, under the microscope, presented such varied and heterologous histological elements that I could not but call it cancerous. The patient was put on a diet of unchopped beef, with tea and coffee, until the condition of the general health

was improved. The forearm was amputated at the middle third by Dr. Ingram and another. A good recovery was made, and he has continued more or less strictly on the restricted diet ever since, and is now at present in the enjoyment of a state of health which seemed impossible before. In fact, he is called well.

The local surgical attendants of Mr. O. regarded his case as hopeless, and publicly reported it as cancer. This I have from reliable testimony, independent of Mr. Osgood.

CASE VI.—Diet of Beef Essence; Great Improvement and Arrest of Disease; Discontinuance of Treatment; Death.

In 1880, Mrs. C., of Boston, wife of an advertising physician, came under my observation as a case of cancer of the womb, thus diagnosticated by eminent medical authority. It appeared to me a case of uterine fibroid, cancerously degenerated. She was about thirty-five years of age, childless, slender build, graceful form, and what was termed a "beauty."

Her disease had lasted for about two years, if I remember correctly. She had great pain in the pelvis, profuse bloody vaginal discharges, great nervous prostration, some emaciation, still a resolute will, and could control her appetite for food partly. She was able to go out a little, but with difficulty. She had an aversion to beefsteak and roast beef. Hence she was put on beef essence, made by putting lean beefsteak (freed from bone and cartilage and cut into cubes of about one inch) into a closed vessel (a common pint tin pail). This was set into a bath of cold water (a common tea-kettle), heated to boiling and kept boiling for two hours at least. The juice or essence of the meat was then squeezed out by placing it in the center of a linen towel, gathering the four corners of the towel together and twisting the folded cloth on to the meat. No water or other fluid was added to the beef, so that the result was simply the concentrated juice.

As the case was urgent, the beef essence was pushed so that she took on some days the juice of ten pounds of beef. One result of this was diarrhœa of a profuse but painless character. It is well, in passing, to note that beef essence in large quantities is a cathartic. Where the patient is feeble, I think this a good medicine for obstinate constipation, as the patient is not weakened thereby. Mrs. C. made a rapid improvement. The hemorrhagic vaginal discharges ceased. She gained in flesh, strength, color and looks. The pains were abated, the local disease arrested, and she rode considerably. But somehow a friction in management arose in which her husband came to the front and took charge of the case. The abandonment of the beef diet was followed by a return of all bad symptoms, and in the course of a few weeks she died of the cancerous disease.

Had this patient continued, I should have tried to have her go on to eat solid beef prepared with a chopper.

Though this is an unfavorable case, still it shows what full feeding on beef will do sometimes in a case undoubtedly cancerous.

CASE VII.—Diet of Beef, Tea, Coffee and Milk; Cure.

Mrs. C., of Somerville, Mass., was a sister of Case VI. Soon after the death of her sister, Mrs. C. applied for examination to see if she had the same trouble.

Her mental condition was bad, circumstances limited, and countenance cachectic.

There was some vaginal discharge, not bloody, and also some pain in the uterus. These things made her apprehensive and anxious. An exploration of the vagina showed knobbed enlargements of the os and cervix uteri, dense and stony, not ulcerated. The trouble was confined to the neck of the womb.

She was put on an exclusive animal food diet, adding tea, coffee and milk.

She was faithful to the extreme, perhaps because she knew the situation perfectly. The result was that the diseased appearances departed, and she is at the present time looking and feeling well.

CASE VIII.—Diet of Chopped Beef¹ and Hot Water; Mild Systemic Tonics; Iodoform and Carbolic Acid Locally; Cure.

In January, 1882, Miss W., a middle-aged clerk, was discharged from a hospital in one of our large cities to die of malignant disease of the uterus. The gentleman of the staff who discharged her has given a diagnosis confirming the above statement. Prof. R. J. Nunn, M.D., ex-president of the Medical Society of the State of Georgia, at my request, examined her subsequently, and confirmed the diagnosis. I mention these things because I treated her without seeing her. She suffered with profuse vaginal discharges, which were sometimes bloody, and always offensive, until the use of iodoform removed the fetor. The uterus was enlarged, the cervix stony, with considerable ulceration and excavation. She was conscious of her situation, and understood the diagnosis. Although placed in unfavorable circumstances, and devoid of her family's sympathy in the undertaking, with a heroism worthy of Dr. Twitchell, she went on to a diet of chopped beef, cooked, and hot water. Systemic tonics of a mild character were administered. Iodoform and carbolic acid were used locally. Morphological examinations of the urine, feces and vaginal discharges, once or twice a week, furnished me the means of keeping her up strictly to the plans. She remained on treatment over a year. From time to time other patients of mine told me of the marked improvement in her case. They said her general appearance was so

¹ I never prescribe beef raw, whether chopped or not.

much bettered they hardly knew her. From being confined to her bed, she became well enough to attend church and go out to walk daily.

In the summer of 1884, she visited me at my office in New York, and I saw her for the first time. Her appearance was that of perfect health, and she claimed to be in that condition. However, on examination, I found the uterus enlarged—about the size of a child's head. There was no ulceration or discharge, and I thought if she was able to carry this enlarged uterus without any trouble that I ought to be satisfied with the results.

1887, January 3. Examined at office. I found by bimanual examination no enlargement of uterus. Os uteri normal or nearly so. Some vaginal discharge. Appearance that of perfect health.

*CASE IX.—Case of Cancer of the Uterus, with Serious Heart Complications. Fed against the Appetite with Tenderloin Steak, Broiled. Result, Cure of Uterine and Cardiac Lesions.*¹

"Some years ago a middle-aged mother of a large family lay sick in bed of great grief at the loss of her last daughter, who died under peculiar circumstances." There were present cardiac hypertrophy and insufficiency of the left auriculo-ventricular valve; severe attacks of angina pectoris, when it seemed that death was near. The objective lesions, other than those named, were retroversion, engorgement, hardening, eversion of the os uteri, and behind the uterus four small, hard, marble-like tumors; very severe pain, sharp and stinging, in the pelvis mostly; profuse vaginal discharge, not bloody; menorrhagia. Added to this there was loss of appetite so complete that every thing in the nature of food was loathed, even milk being repulsive; loss of flesh and strength, being unable to rise erect for ninety days; inability to lie on either side for most of the same time; nausea; legs cold and sweaty up to the knees; oftentimes great stomach distress, with wind colic; urine high colored and of rank smell, as if putrid; bowels constipated; a terrible feeling of nervous restlessness, causing her to move her feet rapidly up and down in the bed; visitors coming and assuring her by their looks and actions that she was about to die. Added to this there was cancer in her family, her father having died of cancer of the stomach and a maternal grandmother of cancer of the breast. She was put on general and local treatment, and it was faithfully carried out in connection with good nursing; but she gradually grew worse, until at the expiration of three months the symptoms were so alarming that I was obliged to take strong and decisive grounds, and to tell her: 'You must eat, or die of cancer of the womb. Make up your mind to one or the other.' She decided to live and to eat, eating *against her appetite*, but

¹ See Case III., "Feeding Patients against the Appetite," Medical Register, Philadelphia, April 2 and 9, 1887.

² This daughter died after a few days' illness, from the results of the perforation of the appendix cæci by an orange seed.

with her intellect and reason and the advice of her medical attendant. She began with tenderloin steak, broiled and cut up very fine. The most she could take at first was a quantity represented by two teaspoonfuls; this she swallowed by a desperate effort, her stomach rising against it. She was fed thus every four hours. Even after she had fed thus for weeks she felt she would rather die almost than eat, but battled *against* appetite by sheer force of will. The only way she could get down the beef was by swallowing one mouthful of lager beer, which was the only article that did not go against the stomach. The quantity of meat was increased gradually, and she was fed *two months against her appetite*. The nausea, however left in about three or four weeks, and at this time she was able to move some, and was placed in a Cutter invalid chair part of the day. After two months of feeding, she was taken carefully to the seashore, and there she began to get an appetite, but it took one year before she could walk five hundred feet.

"No person could have eaten so thoroughly against the appetite as this case did, and it was only from fear of death by cancer, whereof her father died, that made her struggle for life with all her powers. It was not death she feared, but the form, from which she revolted with horror. This is rather difficult to understand, but it is none the less true.

Results.—"1. Heart normal in size.

"2. Valvular insufficiency hardly perceivable.

"3. Angina pectoris gone.

"4. *Uterine disease relieved, tumors disappeared, uterus mobile, discharges normal.*

"5. Urine clear as champagne, 1015 to 1020 specific gravity; no odor; no deposit on cooling.

"6. Restoration to active duties in her position as housekeeper and mother of the family.

"No medicine was given after the food treatment, save Hoffman's anodyne when she had palpitation of the heart and suffocation of breath; the severe, agonizing pain left soon after the diet was begun."

THE ARISTON, Broadway and 55th street, July 9, 1887.

ABSTRACTA.

BERGEON'S METHOD.—Analyses were undertaken at my request by Mr. Edwy G. Clayton, F.L.C., F.C.S., assisted by Mr. F. T. Knott, to determine the quantity of sulphuretted hydrogen in the mineral water or sulphurous compounds used in the process, both before and after injection. * * It is thus seen that there is a great difference in the amount of sulphuretted hydrogen injected, and yet the results of the treatment have been reported

as equally favorable in all cases, the varying amount of gas used not appearing to make any difference. According to the reports, the frequency of the pulse has been reduced, the temperature lowered, the night-sweats relieved, the expectoration diminished, the nutrition greatly improved, the weight rapidly increased, and a great and surprising amelioration in every respect has ensued.—*Arthur Hill Hassall, M.D., London, in The Lancet, July 2, 1887.*

PAPOID.—The trunk and fruit of the South American melon-tree (*Carica papaya*) contains a juice which coagulates readily. The digestive ferment called papoid, is obtained by treating the juice with alcohol. It digests 1,000 or 2,000 parts of moistened fibrin when warm or cool. Muscular tissue gets soft in a five per cent. solution in half an hour. The living mucous membrane is not changed at all. Dogs and rabbits have taken 30 to 75 grains without any symptoms.

Papoid is almost as important a discovery to physicians, in the line of digestive ferments, as quinine was in antipyretics. It is a new and important remedy superior in every respect to animal pepsin and free from the danger of blood poisoning, papoid being entirely vegetable in its origin, and not prepared, like other ferments, from the stomachs of pigs and other animals, with always a possible doubt as to the healthy condition of the material. This drug is at present little known in this country, but its advantages over animal pepsin are such as to command the attention and interest of our physicians to the same extent that it has in Europe.

The therapeutical administration of papoid must be based on the following facts: That it is innocuous when taken internally; that it is dangerous when used subcutaneously; and that its injection into the blood paralyzes the heart and nervous system. Griffith Hughes recommended it in several cutaneous eruptions; Bouchut, in cutaneous carcinoma; Albrecht, for the easier digestion of meat; Tussac, against intestinal worms; Rossbach, for the purpose of dissolving diphtheritic (croupous) membranes (*Zeitsch. f. Klin. Med.* vi. H. 6). A brief notice on papoid is contained on page 1135 of that remarkable book, "Stille and Maisch's National Dispensatory," third edition, 1884. A full description of this drug can be found in the last edition of the "U. S. Dispensatory."

Dr. A. Jacobi, at the meeting of the Medical Society of the State of New York, February, 1886, extolled papoid as a solvent of diphtheritic membrane. Prof. Finkler, University of Bonn, uses five grains rubbed into a paste with a little water, applied to the membrane on a brush, and repeated every hour or half hour. In dyspepsia it relieves vomiting and gastric and intestinal pain. \mathcal{R} . Papoid, gr. jss; Sodæ bicarb. gr. iij; Pulv. trochisc. menth. pip. gr. iij. \mathcal{M} . et fiat chart. no. j. \mathcal{S} .—To be taken with a little water, after eating. Repeat after each meal, three times a day.

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

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VOL. VIII.

JULY, 1887.

NO. 7.

BOOK NOTICES.

WHAT TO DO IN CASES OF POISONING. No. 2 of the Medical Register's Practical Series. By Dr. William Murrell, London. Second American from the Fifth English Edition. Edited by Frank Woodbury, M.D., Professor of Therapeutics and Materia Medica in the Medico-Chirurgical College of Philadelphia. Price, \$1.00 postpaid. Philadelphia: The Medical Register Co. 1887.

This is a book which should be on the table of every physician for constant reference.

We have received the following list of publications:

James H. Salisbury, B.N.S., M.A., M.D., Works of:

"Malaria:" McNaughton Prize Essay, Albany Medical College Alumni Association. 10 plates, 152 pages, octavo, cloth, \$2.00 to physicians.

"Microscopic Examinations of Blood, and Vegetations found in Variola and Typhoid Fever." 7 plates, 65 pages, octavo, cloth, \$1.00.

Ephraim Cutter, A.M., M.D., LL.D., Works of:

"Hot Water and Chopped Beef Plans in Chronic Diseases." Cloth, 50 cents.

"Feeding Patients against the Appetite." 25 cents.

"Diagnosis of Consumption by Means of the Microscope, with Reference to Life Insurance." 25 cents.

"Primer Clinical Microscope." 5 cuts, 50 cents.

"Cereal Foods." 28 cuts; 25 cents.

"Baked Beans: a Serio-Humorous Medical Paper." 5 cuts; 25 cents.

"Uterine Disease Sometimes Called Consumption." 25 cents.

"Food in Motherhood." In preparation.

"Treatment of Uterine Fibroids by Galvanism and Food." In preparation.

"Versions and Flexions of the Unimpregnated Uterus." Third edition in preparation.

Address W. A. Kellog, 9 West 29th street, New York city.

PERSONALS.

—Dr. Ephraim Cutter, of New York city, received the degree of A.M. from Yale in 1855, was made M.D. by Harvard in 1856 and by the University of Pennsylvania in 1857, and has now been honored with the degree of LL.D. from Iowa College, June 22, 1887.

—Dr. John R. Gregory (A. M. C., '58), of Ithaca, N. Y., formerly of West Troy, died at Ithaca, July 7, 1887. He was a son of Dr. O. H. Gregory, of West Troy, and left there in 1875.

—Dr. T. D. Crothers ('65), honorary secretary of the American Association for the Cure of Inebriates, editor of the *Quarterly Journal of Inebriety*, superintendent of Walnut Lodge, Hartford, Conn., and one of the vice-presidents of the Colouial and International Congress on Inebriety to be held in Westminster Town Hall, London, S. W., Wednesday, July 6, 1887, is tendered a reception by the president and council of the Society for the Study of Inebriety, in the rooms of the Medical Society of London, 11 Chandos street, Cavendish Square, London, W., on Tuesday afternoon, July 5, at 4 o'clock.

—"CORRESPONDENCE FROM EGYPT."—Dr. H. R. Greene (Paoha), Director Sanitary Department, Egypt, writes us from Cairo, June 12, 1887, enclosing an interesting criticism of the article headed "Correspondence from Egypt," by J. A. Grant-Bey, M.D., Cairo, Egypt, which appeared in the ALBANY MEDICAL ANNALS last April. The rejoinder is addressed to the *Provincial Medical Journal*, Leicester, Eng., and has been sent for publication to that journal also; as it is rather lengthy, we refer our readers to that journal.

ALBANY MEDICAL ANNALS:

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No. 8.

DIET IN CANCER.

SECOND PAPER—THEORETICAL CONSIDERATIONS.

BY EPHRAIM CUTTER, M.A. YALE, M.D. HARV. ET UNIV. PENN.,
LL.D. IOWA COLL., NEW YORK CITY.

[FOR ALBANY MEDICAL ANNALS.]

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Starting out with the proposition that if any animal gets its normal food and is situated amid circumstances favorable to life, then the animal will be *healthy* (this is from the same root as hale, whole, holy, holiness); that an individual that is whole, symmetrically developed and acting, the tissues normal, the organs perfect, that individual will be *healthy*.

This is understood by man as applicable to other animals than himself. Hostlers know how to bring up a horse to health by giving him *healthy* feeding. Dairymen know how to feed their kine; trainers their pugilists, walkists, boat racers, etc. All seek to get the systems of the animals in their charge in splendid condition, and then the diseased condition will leave as the "carpet baggers" did when government was established in the South. This is so important a principle that we restate it: When the human system has its skin, liver, pancreas, kidneys and digestive canal all in splendid order, the *vis mediatrix naturæ* of the older writers will set the diseased conditions, of

any kind, right. By disease we mean morbid changes of organic structure, though in a broad sense it includes sickness as well. But *sickness* is rather a functional disorder or derangement than one where organic morbid changes are, such as are found in chronic disease.

The expression in the Gospel, "He healed all manner of sickness and all manner of disease," is very expressive.

Now, both are sort of physiological mobs. And, if you look at cancer as tissue run riot in a mob, it is to be quelled as mobs politic are—by law and order. If the riot is too strong for the law and order, then down goes the law and order. If the cancer riot is too much for the physiological law and order, the body systemic perishes. Suppose one of the organs named is affected; if all the others are in splendid order, they will do the work of the affected organ, on the principle of vicarious *function*. For example, the skin will do the work, to a great extent, of the kidneys, etc.

Now, the molecular laying down and using up of all the histological elements of the various organs and tissues of the body systemic are going on all the time. The rapidity, according to the popular ideas, has been estimated to be seven years in which the whole body changes. Dr. Lyonell Playfair has stated his belief that in seven months it is changed. The writer thinks this estimate is much beyond the truth. Be this as it may, seven months is enough for our purpose.

Again, the profession entertains the idea that only the normal tissues are subject, and that the abnormal tissues are *not* subject, to this *law* of molecular change. This is, to my mind, a great error.

Given good blood, good working digestive, circulating, respiring and secreting organs, if there is a diseased condition, the tendency is to remove that condition and establish a healthy one in its place. This is seen in practice. Admitting this for the nonce, as we should get ahead of our subject if we should prove it now, we would observe that food is "an agent of tremendous power" in the treatment of disease not cancerous.

For example, in 1862, a man lay sick in Washington with typho-malarial fever, so diagnosed by good authority. The disease was contracted in the Army of the Potomac. When the writer found him he was delirious, violent, tearing off all his clothing, trying to jump out of a third-story window, absolutely

refusing to take any thing in the shape of food or medicine. This state of things had lasted several days. The prognosis by competent medical authority being fatal, the writer was left to watch for the inevitable death. But somehow the idea of starved nerve centers was suggested, and with considerable opposition on the part of the household (the effort being looked on as entirely useless), some beef essence was made by cutting lean beef from the top of the round into cubes of half-inch size; these were covered in a closed jar, without addition of any water or any thing else; the jar was set in a pot of cold water and the water brought gradually to a boiling point and kept so for two hours and a half. The juice was then expressed through the meshes of a crash linen towel. A coffee cup full of this was obtained at night when men were at hand. Five of them held the patient on the bed by main force, one at each limb, and one at the head held face upward. The writer then forced open the mouth and poured in the essence, and held it there till it was all swallowed. Then he was let go, and, instead of repeating his fierce efforts and movements, he lay quietly down and slept like a child. At the expiration of two hours, more beef essence was administered with the same effect. This proving satisfactory, the plan was kept up until convalescence was established, and in less than fourteen days the writer took his patient to Massachusetts. He is now living, an active business man of Boston. Some quinine was given after convalescence, but the cure—and there was a cure—was effected by the *beef essence and nursing*.

Another case, a daughter of a well-known physician in Middlesex county, Mass., aged ten years, had an attack of what he called typhoid fever. He had been a surgeon in the army and navy during the rebellion, and there is no reason for doubting the accuracy of his diagnosis. During convalescence she began to fail rapidly. The parents sought advice of the writer, saying she would eat nothing but beefsteak, and, fearing to give it to her, they were at a great loss to know what to do. "Give her all she will eat," was the advice. A letter soon came, asking, "How much by weight?" "Any thing under *four* pounds," was the reply. She ate freely, and in two or three days was up, dressed and down stairs, and is alive and well to-day.

During the summer of 1877, the writer was in Peabody, Mass., in consultation with a very reputable and worthy physician, in relation to a case of ovarian tumor. After this he said that

a middle-aged lady, mother of a family, in whom he, for personal reasons had a deep interest and did not want to lose her, was very low with Bright's disease, confined to bed, pale as the sheet she lay on, vomiting all food, emaciated, too feeble to raise her head from the pillow or lift her hands, urine one-third albuminous, etc. He said, also, there was to be a consultation immediately with some physicians to act on the *dernier* resort of transfusion of blood, which her husband was to donate from his arm. He asked if I would perform the operation, if it was thought advisable. On the consultation, the statements were found to be true, but there was no apparatus to transfuse the blood; so it was arranged that I should return to Boston and come back with it at 10 A. M. next day. Before I went home I had a solitary interview with the lady. I took my diet list and began with the articles named in order and asked if she could eat them. She answered "No" to each until I named "tripe." She said she thought she could eat some. "Stop right here," said I; "get some of the best tripe to be found, broil it and let her eat all she can or wishes. In case she vomits it, let her have some more. Give her nothing else." I went to Boston and returned as agreed. At the station the doctor met me and said: "There will be no need of performing the operation." I saw his face was smiling, so was quite prepared for the favorable report that she had eaten tripe, kept it all down, and felt so much refreshed that it was needless to go on as proposed. She continued to eat tripe. In March, 1886, in company with my son, I saw this woman. She was apparently well, though not able to do much work. Dr. — informed us that the casts and albumen did not disappear from her urine till more than a year had elapsed. Her diet till cured was mainly tripe.

Some years ago (1855) I was in the Galt House sitting-room, Louisville, Ky. Two gentlemen were there engaged in an old-time friendly conversation, and talking so loud as to be heard all over the room. It was not a breach of etiquette for me to have become a listener. The point of interest here is this: "Do you know Mr. — has got over his dyspepsia?" "No," said the other. "Well," was the reply, "he traveled and sought the advice of New York and Philadelphia doctors, and then went to Europe to the very best medical talent he could find, and came back, after a long time, uncured. But Dr. S. D. Gross gave him a very simple prescription that has cured. I want you

to guess what it was." The other said he could not. "Well, it was *pickles!*"

In 1881, at the meeting of the Massachusetts Medical Society, Dr. Gross was present as one of its most distinguished guests. The writer sought him out and told the story above, and asked if it was true. "Yes," said he with emphasis, "and you have my permission to say publicly, 'Doctors make a great mistake in eschewing such things as pickles.'"

The writer knows of a case of consumption of both lungs and double pleurisy, in 1862, given up to die by his father, Dr. B. Cutter, a physician who honored his profession for forty years, and by himself. This case, after living during one winter on a fat hog and nothing else, was cured without attendance or medicine, and a few years since was sent to the house of correction for being a hard drinker.

A physician's wife, eleven years ago, had a fibro-cystic tumor that extended from the epigastrium to within one inch of the vulva, the vagina being prolapsed. She went on to a diet of lean *beef* alone, and in three months the cyst had decreased so as to just protrude above the pubis. At last accounts this case remained cured.

Another case of fibroid, which had existed for fifteen years, under like treatment, combined with the iodide of potassium (she was syphilitic), resulted in the complete disappearance of the tumor in the course of two months.

The late Surgeon F. M. Dearborn, U. S. N., left Boston once in midwinter on board the "Franklin." They were caught in a snow storm and he had at once eighty men down with pneumonitis. He fed them beef freely, and one case only died, though all were severely sick.

These cases have been adduced only to give the reasons why it is a possibility that cancer may be *cured* in times to come by food.¹

To syllogize, some difficult cases of chronic and acute diseases of nutrition have been cured by food. Cancer is a disease of nutrition. Hence, it is not improbable that cancer may be cured by food.

¹ Cutter, E., M.D.: "Feeding Patients against the Appetite," Medical Register, Philadelphia, April 2 and 9, 1887; "Seventy Cases of Consumption," Trans. Amer. Med. Assoc., 1880, pp. 338-406; "Food as a Medicine in Uterine Fibroids," Amer. Jour. of Obs., Oct., 1877; "Food as a Medicine in Agalaxia," do., April, 1878; "Food as a Pathologic, Æsthetic, Chemic and Physiologic," Amer. Jour. Den. Scien., Balt., Dec. 19, 1879.

Or, food has proved to be an agent of tremendous power of cure in some acute and chronic organic diseases. Hence, cancer may possibly be cured by the tremendous power of a food.

A comprehensive view of food divides it into *animal*, *vegetable* and *mineral*. It is any substance taken into the system to sustain life in all its varied phases. It includes the air we breathe, the liquids we drink and the aliments we eat. Air and water are mineral. Animal and vegetable food are organisms with which we all are familiar.

The human animal, to exist in normal condition, must continuously and constantly come in contact with foods derived from the above sources. The range of alimentary objects for man is very large, yet we find him about as helpless, feeble and weak in his choosing as other animals, though he must select his normal food, as they do.

But curiously enough, in his early history, nature provides a bountiful supply for all his wants, if she is let alone, in the shape of that unique and wonderful product of the protoplasm of the epithelial cells of the mammary glands—*milk*.

Whatever difference of opinion there may be among intelligent persons as to the diet of after life, there is none about the first supply. *It is animal food*. Under its use, provided the mother is healthy and properly fed, the infant thrives and is one of the most beautiful objects found on the earth. The urine is free from odor, clear as champagne, no deposit on cooling, 1015 to 1020 specific gravity, the fecal evacuations are not disagreeable to the smell, and when examined are found to be structureless and homogeneous under the microscope.

Milk contains all the elements of a perfect food. Were it not so common, the world would marvel at its wonderful properties. But it should be taken direct from the glands, in order to prevent the fermentative vegetations which so soon develop after it has been removed.

The processes of nutrition in a healthy babe are certainly up to the standard of perfection, and one would hardly expect to find the disease we call cancer in them.

It is possible that here is the key to Dr. Twitchell's case; in the milk consumed he found a natural aliment by which he put his system into so perfect order that the diseased condition near the eye was removed, as it were, by the natural laws of the body.

But to our subject. When the infant has become a child hav-

ing teeth, the period of weaning is over and the child enters on a new régime of existence, cut off from its magnificent food of infancy, and the all-important subject of what to eat now has to be settled at once. On what grounds is it usually settled? On those of *ethics*, *manners* and *customs*; always more or less, where possible, on the ground of *æsthetics*, or the love of the beautiful in relation to appetite or the sense of taste.

The writer is aware that the cultivated confine æsthetics to the senses of sight and sound—architecture, painting, music, oratory, etc. But these are all forms of motion; that is, in the actual realization of æsthetics. Still, take a hungry man after a long day's work, the appetizing food will appear more beautiful to him by as much as it is more necessary than all the delights of the eye and ear. The history of the æsthetics includes the delights of the cook as much as those of the artist. Indeed, some cooks call themselves artists.

But this as it may, it is an undeniable fact that man selects food because it is pleasant to the eye, taste, touch, smell and hearing, and not wholly for the purpose of sustaining life and satisfying the wants of nature.

So it will be seen that our common diet lists are made as much to correspond with the demand of æsthetics as is possible with the monetary means of the parties concerned.

Parents and guardians select this food. Those things which are pleasant (æsthetic) to the taste are much in demand—sugar and its preparations for example. It is eaten not for the dietetic value, but because it tickles the palates with its delights (gustatory æsthetics). This article is consumed in enormous quantities.

So fruits are judged by the senses of sight, touch, smell and taste. When we were boys, did not cherries appear more tempting to the eye than they were pleasant to the taste?

This subject is worthy of development in a book.

Other aspects of food are hardly consulted by the great body of eaters. These are the chemical, physiological, pathological and therapeutical.

There has been, and probably ever will be, the greatest diversity of opinion as to what constitutes the natural food of man, far more than for the so-called lower animals.

What to eat has been the watchword of nations, religions and governments for ages. Some say no animal food should be

eaten and others say the reverse. Vegetarians fight animal food eaters, and *vice versa*; but, so far as the writer can judge, it would seem as if the question had settled down to the proper proportion of animal food to vegetable food. This is not a polemic paper; hence we would respect those who respect us, and, while we would not try to force our convictions on others, at the same time we would maintain our own views and give the reasons therefor, as, if they serve no other purpose, they can act as a history of opinion prevailing at the present time.

The writer adopts the plan of Dr. Salisbury (two-thirds animal and one-third vegetable) as the natural, normal food for man in health after weaning.

The reasons are as follows:

1. When men desire to accomplish certain feats, like a contest of pugilists or of boat-racing, they go on to this plan nearly, with exercise, and the invariable result is a wonderful improvement in physique, and the more rigid the training the better the chances of winning in the competitive contests.

2. Such a diet has been found in my own experience and that of others to supply the nursing mother with an abundance of milk for her offspring, of a healthy kind, so that the babes have thrived wonderfully, and the supply has held out longer than when the mother was fed on other food.

3. The urine of those who live on this proportion of animal and vegetable food is almost identical in physical characteristics with that of the healthy babe. The usual offensive odor of urine does not belong to an absolutely perfect state of health, and many persons go through life calling themselves and being called healthy when they are not.

The human body is very accommodating to circumstances and elastic. It will exist under unfavorable circumstances, and there must be great allowance made for constitution, character, etc.

But healthy feeding, other things being equal, will give great advantages over unhealthy. Some of these circumstances are occupation, bathing, exercise, cleanliness, healthy telluric and atmospheric surroundings, wars, rumors of wars, pestilences, perils by land or sea, governmental conditions, color, sex, profession, education, race, industrial and geographical environments, etc., etc.

4. Dr. Salisbury (Alb. Med. Coll., '50), in making this estimate, based his judgment on actual experiments. He went into close

quarters and lived with men whom he *hired* by the day to live on one article of food and water. He kept them under a sort of military discipline, having complete surveillance, so that he was sure they did not eat any thing else; also, he used to march them out on the streets in military order for exercise. At the same time he studied the chemical and morphological characteristics of the blood, urine, feces and sputa to see the effects. This is not the place to give the details, which are intensely interesting, but he found that *no one could live on any one article of food for over twenty-two days, save beef, on which he could live right along and be maintained in health.* Crackers played out in eight days, and the subjects were filled with the carbonic acid gas and fuddled with alcohol produced at the same time in the alimentary canal by the fermentation. This is not so surprising when it is mentioned that wherever carbonic acid gas is formed from the fermentation of carbo-hydrates, alcohol is also found, whether it is done in the stomach or in the yeast-pot. Those who lived on fish exclusively had their urine loaded with phosphates.

5. The fact that about two-thirds of the fifty-two teeth of a human being are mechanically formed for eating meat and about one-third are formed for vegetable is also another reason for this rule.

6. Again, the stomach is organized to digest meat, while the small intestines are provided with glands to digest vegetable tissues. For this reason the diet should be mixed; that is, animal and vegetable, and not exclusion of one or the other.

7. When an adult lives on this proportion, Dr. Salisbury found the same physical qualities of the urine and feces as found in healthy nursing infants, and he also states that if intestinal gases are voided they do not have the rank sulphuretted hydrogen odor so common to discharged intestinal flatus.

By this it is seen that his standard of health is set high, too high perhaps, as it is not often found; but still the fact remains that this result may be obtained in almost any case of disease, no matter how chronic or severe, if the patient will live faithfully to the plan which is more rigid than two-thirds animal and one-third vegetable, as to the writer's knowledge has been done, and is being done, in consumption and syphilis, to speak of no more. These tests show to the writer's mind the validity of the position of Dr. Salisbury, in a practical way, by actual examples of

living cases watched by chemicals and the microscope so positively that he does not propose to give up until the opponents of the position demonstrate that it is incorrect, not by simple *dicta*, but by the tests of physical explorations with the best modern instruments of precision.

It now remains to point out the bearings of food upon cancer. If cancer is a disease of *nutrition*, why is it not the most sensible way to attack it through the food?

Here it will be proper to show the reasons why cancer is called a disease of nutrition, as this is a vital point in our argument, and then we shall point out the ways in which it may be possible for food to modify cancerous condition.

Reason 1. Cancer, except in its last stages, is not a disease of the blood, so far as the writer can learn by morphological blood examinations for many years. This is also Dr. Salisbury's idea, though quite contrary to the popular and professional opinion. We are quite willing to receive correction in this respect by any competent observer. Beale has taught that cancer is bioplasm with a diseased impress; that is, the blood element has a taint which manifests itself when it has a chance. It is latent till the conditions of development arise; till then the germs, so to speak, do not exist. This is his explanation of the hereditary taint. In our present status of knowledge, Beale's view must be accepted till a better is presented.

But our point is that, as cancer is not found in the blood, we must look for it in the solid tissues, which are generally found in rank, lawless development; in weak organizations with no powers of resistance like healthy tissue, the histological elements being out of normal place. This being so, then we may look for analogues in other kingdoms where tissue abnormal changes occur in organisms that can be studied, or have been studied, by man for ages; that is, the vegetable kingdom.

If a farmer undertakes to raise potatoes without manure, the crop is liable to be stunted, diseased with parasites, tumors and soggy structures, and no one wonders. Other things being equal, the result is by thoughtful minds attributed to want of proper soluble mineral food, and the researches of scientists bear out this popular view; so that it may be said, in general terms, if one wants to produce diseases that are analogous to what we call *cancer* in the animal kingdom, it is only necessary to interfere with this natural condition of growth, of which food is the

most important element, as without food the plant could not grow at all. For more ideas in this direction, see the admirable series of volumes by Prof. S. W. Johnson, of the Connecticut Agricultural Station, "How Crops Grow," etc., published by Orange Judd & Co., New York.

Reason 2. Cancer is thought to be a disease of nutrition from the variety and multiplicity of its macroscopical appearances. My father once had a patient, a young man of thirty years of age, who died of an obscure disease, the real nature of which was proved by a post-mortem examination to be cancerous. The writer was the only one who suggested such a diagnosis, from the presence of some hard kernels in one testicle. Being nothing but a medical student, his opinion could not have had much weight. To be brief, the abdominal and thoracic cavities contained over a hundred cancerous tumors and conditions, of several colors and forms. Some of them were in contact with the peritoneum, red as a lobster, with flattened, crenated edges, one and a half to two inches in diameter, free and unattached, like chips carelessly thrown in. Saddling the lumbar vertebræ was a large liver-like tumor that weighed several pounds. It was in organic connection with the bodies of the vertebræ, which, removed and sawn into, disclosed the disease inside the bones by the black, burnt color of the spongy structure and its diminished trabeculæ. The liver had its convex surface nearly all occupied with a large, thin, transparent sac filled with a hyaline, blue-colored liquid whose morphological elements were made up of caudate, mother and hyaline cells resembling cartilage cells in perfection. Over the lungs were found very numerous free and variously colored cancerous growths. Some were found in the lungs and heart. The nodules in the testicle were also cancerous. In short, there was hardly an organ or tissue that was not profoundly invaded by the diseased condition.

Though this, to the writer, was an unparalleled case and the relation is toned down, still it practically exhibits in one instance how cancer may riot with all tissues.

The man suffered untold agonies of body, and the general opinion of the physicians present was that this remarkable condition of organic disease was induced by habits of dissipation, wrong feeding and bad modes of life. It is quite certain the professional gentlemen would not deny that cancer in the case

was a disease of nutrition, though the family was wealthy and were good liver, so-called.

Reason 3. Cancer is regarded as a disease of nutrition because fibroids and solid tumors do cancerously degenerate. One case of the writer was a large, multilocular, sub-peritoneal, abdominal and pelvic fibroid that was carried for thirteen years, the subject maintaining her place as mother of a large family for this length of time. In early spring she moved into a house that had been unoccupied all winter and stood in a low, marshy place. She took cold, was overworked and never properly fed, and her disease changed its character. She then went to a hospital, and was nightly subjected to vaginal douches of hot water, which, she said, always scalded and made her worse. At my visit she had returned home, being given up to die, as the disease had involved the body and neck of both bladder and womb and all the fibroids.

It is clear that when such growths put on malignancy it must be from some modification of the nutrition, and in the case given may have been somewhat as follows: The patient had just about vitality enough to carry her fibroids, but when the extra demands on her nutrition were added by the domestic exigencies referred to, then the tissues of the fibroid ran riot into cancer. She attributed the rapid increase of the disease to the depressing influences of the hot water.

Reason 4. Cancer and other organic disease is more prevalent among those who are ill-fed, improperly fed and abused by themselves or others. For example, the writer has known a case of cancer of the stomach, when it was evidently caused by living in the suburbs and having business in the city, taking a light lunch there and returning late in the day, all tired out and having a hearty supper with much condiments.

A case of fungus hematoids, involving the left shoulder joint and finally attaining a diameter of at least one foot, occurred in the practice of the writer's father many years ago. It was an awful sight, with its livid volcanic-like protuberances. Indeed, it made up the larger moiety of the boy's body at his death. Now, this patient was ten or twelve years old, an orphan, obliged to pick up a precarious living by setting up nine-pins in a bowling alley. For some real or fancied neglect of duty he was beaten with a nine-pin. He soon after developed the disease, and ran away from the city into the suburbs on a railroad track,

being found disabled on the track, and was cared for by the town authorities as a pauper. This terrible case of cancer was made possible by ill-nutrition in poverty and orphanage. Wealth does not necessarily give good diet.

It is almost useless to enlarge on the idea that defective alimentation is a predisposing cause of cancer, nor is it worth while to adduce more reasons in favor of the view that the various diseased conditions called cancer are tissue diseases of nutrition, though it may not always be possible to trace the connection clearly. The warp and woof of disease embrace many different causes, all very much mixed. Indeed, it is so with most every thing, even an apparently trivial event. So, when the multiplicity of causes, functions, operations, forces, factors and conditions that combine to produce what we call life in the human system, are taken into account, it is not to be wondered that the ætiology of disease is a very difficult subject, and all reasoning about it is liable to doubt. Still, as there are salient features in landscape scenery by which we identify localities, so in the disease under consideration mal-nutrition, however caused, is a great predisposing mountain or landmark of identification.

Mental depression is too often an element in cancerous cases to be overlooked. There is nothing like worry to wear on the nutrition of the body. Worried lovers of both sexes, even the poets rhyme about their loss of flesh. The worried men of business, and women, who do far more work than most business men (for the writer believes that a mother of a large family has more demands made on her worrying faculties than the heads of great mercantile houses), grow poor, though poorness of flesh is not an infallible sign of worry. Now, sudden, marked and decisive loss of flesh from worry shows a terrible strain on nutrition.

As we now understand it, the explanation is that it takes so much force to "run" the nervous system, under the exhaustive strain of worry, that there is none left to "run" the tissues, and the waste is not supplied and vital force is not given to the local nerve centers of nutrition, and it is but a step or two from tissue wasting to the mal-produced tissue of malignant and non-malignant diseases. No doubt had Case III. lived on the animal diet exclusively she would not have had the mal-nutrition, for the following reasons: The animal diet puts the system in splendid condition, and confers strength to bear up under the stress of worry, etc. One way in which this is done is by saving the

forces. It is more work to digest vegetable food than animal, and the nerve force saved is no small item. If this is doubted, study the effects of baked beans on epileptics, and bad vegetable food on children or adults. It would seem as if the ganglionic nerve centers that preside over digestion in such cases were so completely overwhelmed that all the other nerve centers are involved in the loss of force, and the epileptics and the colics must be regarded as the result of a job of digestion too great to be done; for, change the patients over to animal food, properly prepared, and the fits and colics cease. Language here seems to fail to be adequate for the ideas to be expressed.

This case (III.) lived on flour bread, sugar, tea, coffee, some animal food, probably about one-sixth of the latter to five-sixths of the vegetable food. The flour and sugar being largely in excess and both very poor nerve foods, is it a wonder that tissue degeneration resulted, as there was a tissue taint?

Malignancy.—The idea of return after removal and the tendency to a fatal issue is the position of malignancy which the profession and public attach to cancer.

And the real issue in the present writing is—can a malignant disease that has shown its character by recurrence be arrested and dissipated. Yes; and Dr. Twitchell's case above proves it. But, says my reader, it is only one case. True; but it is positive, and, so far as one case goes, it shows the possibility of a so-called malignant disease being not malignant, and thus we are set face to face with the dictionary and our landmarks of knowledge. But are our ideas to be measured by opinions or by facts? Language is not fact. It is, or should be, an account of facts, which are eternal, while language changes in form, words and spelling, so that in six hundred years one can hardly realize that our language is English.

Again, as the world moves on, things that are declared to be impossible by foremost scientific and learned men have become facts almost while they are speaking. A notable instance of this occurred in 1858, when a learned society in London awarded a gold medal to a savant who read an essay on the absolute impossibility of laying an Atlantic Ocean telegraph cable, but the cable was laid before the medal could be put into the hands of the scientist, and has been, with others, a great accomplished fact in our modern civilization for over one-fourth of a century. Wonder if the savant got his gold medal? If so, I don't think

that he makes much show of it. So, also, of Faraday and his celebrated utterance as to the absolute impossibility of ocean steam navigation.

These are not adduced to show that *all* new things are possibilities, but that some are, and people should be cautious not to take positions as to impossibilities unless they are well acquainted with the facts in the case. You say that there is but one case like Dr. Twitchell's, but this is not the same thing as saying that there are none such.

The fact is, there is but little encouragement to report such cases as things now are. Few have the courage of a Bowditch to speak out the truth when it must disturb settled convictions and established opinions. And who is there that knows but that other cases, faithfully carried out like Dr. Twitchell's, might not have been cured? As, if one case has been cured, it is possible more may be. (The other cases in the first paper are very respectfully presented to the consideration of the profession.) Just here is the rub. Few have the energy of character to act up to their convictions and carry out a plan that rides across the usages of society, the appetites and the deranged desires of a sick and diseased body. It is training for health against disease. There is also paralysis and indifference to the fact of a great impending catastrophe, though the condition of mind may be just the opposite. Writes a patient: "Cancer is the worst word in the world to me. No one could have failed faster than I did for two weeks after what Dr. M—— said to me. * * * You who are so strong and sensible may think me silly in this, and we will let it go that I am."

This great element of depression aids much in the tissue riot. In my patients hope must be inspired, faith must be raised, and not only must the physician believe, but he must make the patient believe. Every thing must be husbanded. There must be no force expended on any thing else but running the system and fighting the disease.

There are different types of disease. Cancer has them too. Some types are quick and kill almost by a blow, or destroy like a hurricane or earthquake, against which man is powerless. These admit of nothing like *possibility* of cure. There is not time left to save. Like a stroke of lightning, it kills resistlessly. But when the disease is slow, the circumstances favorable (and this means a great deal), and all work together with rigid fidelity, why, there is a possibility of doing good work.

The best circumstances are a sanitarium devoted to this purpose, where systematic treatment can be practiced, the food selected carefully, the cooking perfect and the patients not allowed to vary from the plans. Oftentimes they begin, run well, and seem to realize the situation, and the growth shows a diminution, and then they will fall away from the diet, and often charge all the results of the backsliding to the plans of treatment. It is a great thing to manage patients and keep them under control. All will allow this, for, if not, no good results can be expected to follow.

Every means should be used, then, to keep up the discipline. Frequent communications, examinations of the blood, urine and feces to see if there has been any variation, and, when detected, to stimulate the poor, weak offender to the narrow, straight path of duty again. Lapses must not go unnoticed. The patient must be watched with jealous, interested care. Then, if time enough is taken, comes the possibility of cure. But all the chances can be lost very easily. A few mouthfuls of wrong food will do essential damage. "Few appreciate how sensitive the system is to daily and hourly impressions" (Dr. Salisbury). A weak, irresolute mind, wavering character, restless and peevish disposition, a constant view of the dark side—these qualities will not succeed in almost any work. One who gets well by self denial, faith, perseverance, pluck, determination, energy, is like the victor on the battlefield after a long and tough fight. There is the same exhilarating triumph, and after the conflict is over he finds a conversion of appetite. Food liked before becomes distasteful, and it is very easy to go on in the right mode of living, so that, the predisposing cause being removed, the disease is vanquished by the simple molecular changes of nutrition. Nature does the work. Medicines are valuable to stimulate the glands, remove engorgements and keep all the organs in good working condition. This is their place, for medicines do not cure of themselves. When a ship's cargo is shifted so that her spars dip into the sea, it is rearranged by the crew, and the ship rights itself, and the crew say, "We have righted the ship." This is certainly so, but nature had a great share in the work. The crew simply acted in obedience to the laws of gravitation.

So man cures disease. The medicines, food, etc., help nature, and, in accordance with her laws, *she* does the cure.

Agree to have a possibility of cure of cancer, there must be time—one to four years. This is a barrier to many. They

could go one to three months, but not a year, and so throw away their chances.

It takes means. Unfortunately the terrible disease comes to the poor and ignorant, and there is no help for the words of the preacher, "The destruction of the poor is their poverty." It is a costly matter to provide for the sick of this class with food, care, nursing and medical attendance. The medical profession give away an immense amount of unrequited services, but so long as they are not supported by the public, they often give away more than they can afford to and impoverish themselves. Here is a chance for the benevolence of the rich if it could be rightly adjusted. Many lives are now being saved by the bounty of the rich, but many are being lost for the want of aid. It would be possible to save more cases than now, were more means at command.

Advertising Quacks Who Have Published Claims to Cure Cancer.—The papers are full of such claims, and, in the present state of the medical profession, it is difficult to see how any estimate of them, other than bad, can be made, simply from the fact that it is very dangerous for any medical person in good and regular standing to have any thing to do with quackery. Still, the people patronize them, and reports of cures are rife. Now, it is possible that some of these cases may be cancer and may have been cured by quacks. History shows that Paracelsus was a quack, yet he did much to advance medicine. Not long ago one of the most eminent surgeons was extolled by a layman for his wonderful operations on the bladder; yet a swineherd in France is said to have introduced the operation for stone, and must have been a "quack." A good many surgeons have founded their great reputations on the same operation of centuries ago.

There is said, on good authority, to be in a town in central New York a family who treat cancers by the use of a paste, the formula of which is known only to two members. This family have made immense fortunes, have large establishments and effect many cures (?). Not long ago a distinguished politician of Boston had cancer of the leg and went to this place for treatment. It was a bad case and seemed unfit for any treatment, and was dismissed. This action was creditable, as there was plenty of money in the case.

There is evidently something to be learned here. If we had patronage in this country, as in the old, such a patron could organize a commission of medical men and have it authorized to make an investigation by some body, as the American Medical Association, and pay the expenses. The report of such a commission would settle the matter for the profession. Should it be found that it is a fraud, the patron and profession would gain credit for using all honorable and legitimate means to avail themselves of the knowledge. Should it be found that there were cures, then due credit should be awarded as deserved.

In passing, as to these pastes. The writer, a few years ago, had a case of epithelioma of the tongue, in Connecticut. The tumor was about an inch and a half long and one inch wide. The case was put on diet, with the understanding that if there was no improvement, the tumor was to be removed by the galvano-cautery. Officious relatives and friends took charge of the case, and the patient was sent to North Adams and operated on by paste. He suffered indescribable agonies, "the torments of hell," as he told my son afterward, and caught cold by staying in an unwarmed room, and died at his home a short time after his return. I saw him a short time before his death, and found that the cancer tissue was destroyed. It is only a short time since that my son informed me that while attending the clinic of one of our most eminent surgeons he heard of a case of epithelioma almost similar to this one, which was removed eight years ago by the galvano-cautery, the patient now being in good health. These North Adams cancer people sent down a young man to doctor General Grant, and it was with great pleasure that I wrote to one of the General's physicians informing him of the facts above stated. My letter was given to a *Boston Herald* reporter and published in that journal; so I trust that his posing as a martyr of bigoted doctors was somewhat offset.

What makes the writer think that some cases may be cured as represented is that he once saw a case that twelve years previous had been under the care of a so-called famous cancer doctor in Boston. The woman said she had been as she was when seen by writer—bloody vaginal discharges, agonizing pain, walls of vagina and urethra like stone, terribly hyperæsthetic, etc. She died thus, and the writer could not but look on her as a case of cancer. However, more lately the writer saw another case of this same doctor, called cancer and treated by him for years as

such, but which, when examined, proved to be a *fistula in ano* of fifteen years' standing in a remarkably healthy woman. A papilla, large as a forefinger's end, occupied the perineal end of the fistula, and the ordinary surgical operation with one cut did away with the "cancer."

They make thorough examinations of these things in Paris. A few years ago a mulatto gained a tremendous celebrity as a cancer doctor, and was surrounded with an abundance of wealthy and fashionable clients, and made fame and fortune. But when he was given wards in a hospital and cases were carefully watched, his star went down like a descending rocket, as his claims were not sustained. It may be his treatment was thwarted unfairly. We hope not, as it is a terrible subject to trifle with. Every advantage should have been given the claimant, as there doubtless was, even if irregular and ignorant.

But, a regular medical man, who has, or thinks he has, any thing to throw light on the *possibilities* of curing cancer, so long as he observes the rules of good society, is entitled to a respectful hearing. It is too bad that original workers are bulldozed, insulted, ridiculed and put down by men who profess to be gentlemen, scholars, physicians. This is bad for the workers, who are thus soured and discouraged. It is bad for the profession, as it often loses the knowledge it needs to save life and prevent misery. It is, to speak plainly, a devilish thing thus to throttle progress, and is worthy of the dark ages of ignorance and superstition. It was enough to raise a storm of righteous indignation to see how some tried to hoot down Dr. Sayre and his plaster jackets. To interfere with any means whereby the miseries of poor humpbacks could be relieved was a hellish thing.

Ere long it is hoped to have an institution in New York where these cases can be treated on the plans here laid down, and where physicians may come and study results for themselves, and see results which, judging from the past experiences, justify a hope that the possibilities named will be realized. There will be no arguments, but facts. If it is found that we have been mistaken, we will apologize for our errors of judgment, but no apologies will be given for having acted up to our convictions.

THE ARISTON, Broadway and 55th street, July 30 1887.

CORRESPONDENCE.

ORIENTAL PRACTICE.

Syrian Lithotomy—Tape-Worm; Heroic Treatment—Harsh Methods in Eye Diseases.

ABEIH, MT. LEBANON, July 26, 1887.

Editor Albany Medical Annals:

Dear Doctor—I have many times thought of writing you, but my professional life has been so very busy that I have very little time for letter-writing. I am laid up for repairs under orders of Dr. Van Dyke, who tells me that if I wish to live in Syria I must rest from every thing like work for at least three months. I have been overworked, and my serious illness last summer has left its impression, so I am not as strong as I was.

You have no idea of the immense amount of work a medical missionary has to do in this country, of the droves of people who flock to the dispensary and with him on his tours over the country. It would require an iron man to do all the work. When I am in Tripoli, I refuse all the medical cases I can, devoting myself as much as possible to purely surgical cases, of which I have many.

LITHOTOMY.

In this limestone region we have many cases of stone. I agree with Dr. Vander Veer that supra-pubic lithotomy will never compete favorably with lithotripsy. I prefer the lateral operation. I have removed some large stones, and have seen no serious symptoms follow. In all my stone operations I have lost only one case, and this one died because his people did not give him proper nourishment in my absence.

A few months ago I visited a large village among the Nusairiyeh. The village barber called on me. These men not only ply the art of removing the hair from their customers' chins and heads, but they remove various quantities of blood from their bodies; the more ill or weak they are, the greater the quantity that is removed. They are also doers of castor oil and sulphate of magnesia, no matter what the disease may be.

This man seemed very much interested in the operation of removing stone from the bladder, and in the various instruments I used. After the operation was completed, he said he liked his way best. "What do you know about removing stone?" I asked. "Oh, a little; I have removed over two hundred in ten years," was his reply. I was inclined to doubt this statement. The man called to a boy to bring the smallest box of stones he would find in his house. The lad soon returned with a box containing sixty-three stones, which he spread on the floor before us. The barber's face shone with pleasure at these evidences of his skill. The fruit was before us, even if the patients did not all recover from their removal. There were all kinds and sizes, uric acid and oxalate of lime calculi being the most numerous. Some of the latter were of immense size. They showed by their broken spines and battered appearance the efforts used in their extraction.

When I saw the stones, I knew I had the pleasure of meeting one of those professional "Arab stone extractors" I had read of in books. In response to a request to tell me the technique of his operation, he kindly did so. He was very familiar with the symptoms of this disease, gave me all the signs, etc.

When he suspected stone, he passed his finger up the patient's rectum; sometimes his whole hand, and felt for the stone. When he was satisfied of the presence of the calculus, he would place the patient in the usual position, having five or six men to hold the patient; no anæsthetic was given. The operator would again pass his finger up the rectum behind the stone, bringing it up against the perineum; then with a knife, curved at the upper two-thirds, he made an incision in the median line upon the stone. If the stone was small, he would remove it with his finger; if large, he would pass behind the stone a hook and drag the stone away. The knife and hook were of the rudest character, made of an old file.

I asked him if he lost many patients after the operation. He replied that many died of exhaustion, but that he never lost a case from hemorrhage. Strange, when we think of the reckless way he plunged the knife into the perineum. The only thing that seemed to trouble him was the fact that the greater number of his patients who recovered after the operation suffered from incontinence of urine or had a fistula. The people have had the utmost confidence in him, and were willing to suffer all the complications following his rude way of operating to be relieved of their misery.

Since the time I saw this man he has complained that I get all the stone cases, "all because the American doctor never loses a case by death, and all come home and make urine from the natural passages and at regular intervals." The principal reason for their coming to me is not so much the successful results as it is the removing of the stone without pain. They have a supernatural reverence for an anæsthetic.

TAPE-WORM.

In this country one in every five have tape-worm. This is owing to the custom of eating so much raw meat and defecating in the open fields. Nothing disgusts an Arab so much as to see "Franks" use a house (water-closet). They are in the habit of going up some frequented street, if in the town; if in the country, just where they happen to be. Fancy having a dozen or two chickens and several dogs following you if you happen to step aside from the beaten path in the direction of a place where the villagers usually go when they wish to relieve nature; they are the scavengers. I call to mind seeing several chickens foraging themselves with the links of tape-worm. Ever since, I will not eat chicken unless I *know* they have not been raised in a country village.

When I first came to Syria, I prescribed for these people the western doses, and failed every time. I thought perhaps the drugs were to blame. I sent for fresh. I used every thing I had read of, with very little success, until, in desperation, I gave larger doses. In fifty-five cases I have succeeded in removing the head, and thus relieving the patients permanently of their unwelcome tenant.

I will give you the history of a case that will give my present treatment. Mrs. A. had been suffering from tape-worm for twenty-five years. She said that she had not been free from pain during that time. She ate immense quantities of food; appetite never satisfied. Has taken medicine from many doctors, only resulting in passing yards of tape-worm.

I gave her filix mas in doses I had been taught to give. She passed eighty-two feet of worm; afterwards the symptoms were worse. Three months after she began to pass the links. I gave her fresh extract of pomegranate root. She passed seventy-nine feet of worm. I wanted to give her some more of the extract, but she would not consent, saying I did not know how to treat tape-worm.

I made up my mind I would kill that worm or I would make the woman dreadful sick. I waited some time for a chance. In the meantime I got some fresh ethereal ext. filix mas—something I knew was good.

I ordered the woman to eat nothing but milk for three days. On the night of the third day I gave her eight comp. cath. imp. pills; the next morning at daylight, filix mas 3 iss; in half an hour a second 3 iss; one hour after, castor oil, ʒj. Twenty minutes after, I had the pleasure of seeing a quantity of something that was once a tape-worm, now looking as if it had been used pretty roughly. The head was found after some search. With the removal of the head, all symptoms disappeared.

Since then, I have treated fifty-four cases, and have given in the greater number 3 iij of the drug. There seem to be two conditions to insure success—a few days of milk diet and a brisk cathartic, followed by large doses of *fresh* male fern. I have never seen any bad results following the use of this drug given in these doses. If I should have a case that did not succeed after the above treatment, I would give a third 3 iss sometime during the day. Of course, I would watch my patient for any ill symptom. But I do not apprehend any necessity of giving more than 3 iij of the drug, providing the diet has been strictly followed out and the drug is *fresh*.

EYE CASES.

Two weeks ago I visited a large village, where I found many cases of granular lids and other eye diseases. They told me of an "eye-wash" used here, made as follows: Take one onion, bruise it well, then add one tablespoonful of salt; mix thoroughly, then add eight ounces of water. Sig. gtts. x in each eye daily. I asked them if much pain followed the use of this remedy. They replied: "Of course; it would be of no use if it did not give pain."

It is fearful to see the quantity of nitrate of silver (they call it the stone of hell), sulphate of zinc and sulphate of copper that these people put in their eyes. I wonder that every person who has ever had any the matter with his eyes is not blind, when we see the eye-drops they use.

The man who is to take this letter to Beyrout to mail waits this, so I must close. If you find this interesting, let me know, and I will write you again.

My kind regards to Dr. Vander Veer and all of my friends and teachers in Albany. I do not know when I will visit the United States again. I trust soon.

Sincerely your friend and reader,

IRA HARRIS [A. M. C., '81],

Tripoli, Syria.

STATE BOARD OF MEDICAL EXAMINERS.

110 WEST 84TH STREET,
NEW YORK, July 25, 1887. }

To the Editor of Albany Medical Annals:

Dear Sir—A law of 1874 established for the State of New York a State Board of Medical Examiners. Frequent deaths and occasional resignations changed its original membership several times, until, upon the recommendation of the undersigned (who therefore objected repeatedly to his own appointment), and for reasons easily understood, all the members of the present Board, with one exception, were selected by the Honorable the Board of Regents of the University of the State of New York from amongst the medical men of Albany, the seat of government and the Board of Regents.

The profession never expected the law as it was passed in 1874 to be efficient. It was believed by many that some of the medical colleges objected to the establishment of a State Board altogether, though others were known to favor it. It was certain that sectarian influences succeeded in undermining the passage of the original bill and emasculating it. *It is certain* that no State Board of Examiners will ever benefit either the profession or the public, both of which stand in equal need of it, before the license to practice medicine will depend on the *compulsory* passing of a successful examination before the State Board. As the law stood, nobody ever applied for examination and for the degree of M.D. of the University of the State of New York, who was in possession of a diploma from a college in good standing. Such few as volunteered to come forward were men who had previously failed in their college examination, or "practiced medicine" without study, knowledge, or any title whatsoever. There being no rules and regulations referring to a minimum of accomplishments or requirements, a few of these were let loose upon the unsuspecting public with a diploma; the majority, however, failed.

When the new Board was appointed in the beginning of this year, its members accepted their positions upon the conditions that the Board of Regents would authorize a number of rules and principles which were to regulate the examinations. I am directed by the Board of Examiners to present them to you for your information and, if you deem proper, for publication and comment. We know quite well that, as long as the examination by the State Board is not made *compulsory*, any number of rules and principles will prove their inadequacy and inefficacy again and again. But the present Board hopes that its earnest recognition of the rights and dignity of medical science, art and practice will be admitted by, and found acceptable to, the profession, and that the latter, after a minimum of requirements for the admission into the ranks of the profession has been officially accepted by the Regents, will feel encouraged to continue its exertions in behalf of both the elevation of the standard of Medical education and the protection of the public.

Not one of the recent applicants for a degree has proved successful. One of them had failed in his college examination a few weeks previously, and now threatens to swell the number of graduates of the "university

of a neighboring state. Similar occurrences are not at all rare. Candidates failing in one college will obtain their degree from other colleges in the same state or other states. Will not that suggest the necessity, instead of a State Board, of a United States Board of Examination?

Very respectfully,

A. JACOBI, M.D.

[The following document was enclosed:]

RULES ADOPTED BY THE STATE BOARD OF MEDICAL EXAMINERS.

The Members of the State Board of Medical Examiners accept their positions with this understanding:

A candidate for the degree of Doctor of Medicine to be given by the Board of Regents either desires an additional degree after he has received a diploma from a chartered medical college, or he has no diploma from a chartered medical college and desires or prefers one from the Board of Regents. The degree given by the Board of Regents is to be, or become, an honorable distinction. It must be the object of the law to protect the people and to ennoble the medical profession, and not to facilitate the entrance into it of persons unfit or unqualified. The profession does not require larger numbers, but does insist upon an elevated standard. Therefore the examination must be strict, and must be conducted according to the following rules:

1st. The examinations before this Board shall be conducted in the English language exclusively.

2d. The candidate shall be allowed two and a half hours for each examination. The examination shall be in writing. The candidate must not consult books, extracts, notes, or other persons, and must not communicate with any one during the two and a half hours allotted to him. To do so is to be considered a failure to pass.

3d. The examination in clinical medicine and clinical surgery shall consist in the actual examination of patients by the candidate, and a discussion in regard to the diagnosis, prognosis and treatment of the cases.

4th. The examination in chemistry shall include the actual testing of a specimen of urine, in regard to its action, specific gravity, and the presence or absence of albumen and sugar.

5th. Each examiner shall have the privilege, if he so desire, of supplementing his written examination by an oral one, in the presence of two other members of the Examining Board.

6th. The scale of marks shall be from zero to ten; ten being perfection, and any thing below six being a failure to pass the examination.

7th. The questions and answers, with their marks, shall remain in the possession of the Board of Regents, and shall be open to inspection.

8th. When the candidate shall have completed all his examinations, the Board of Examiners shall meet and hear the result of the examination in each branch. And within ten days thereafter each member of the board shall make a written report as to the merits and acquirements of the candidate, being guided in this report not alone by the result of the examination in his particular branch, but also by the result of the examination in the other branches. And each member of the Board shall send his report,

together with the questions and their answers, and their marks, in his branch, to the Secretary of the Board of Examiners, to be by him transmitted to the Secretary of the Board of Regents.

And, furthermore, it is the opinion of the Board of Examiners that, in order to receive the degree of Doctor of Medicine, the candidate should successfully pass in every branch, or at least in every branch but one.

ABRAHAM JACOBI, M.D., *President,*

Examiner in Pathology.

ALBERT VANDER VEER, M.D., *Vice-President,*

Examiner in Surgery and in Clinical Surgery.

HENRY HUN, M.D., *Secretary,*

Examiner in Clinical Medicine and in Materia Medica and Therapeutics.

JAMES P. BOYD, M.D., *Examiner in Obstetrics.*

FRANKLIN TOWNSEND, M.D., *Examiner in Physiology.*

SAMUEL R. MORROW, M.D., *Examiner in Anatomy.*

WILLIAM HAILES, JR., M.D., *Examiner in Histology.*

WILLIS G. TUCKER, M.D., *Examiner in Chemistry.*

DR. PHILIP T. HEARTT.

WATERFORD, N. Y., August 9, 1887.

Editor Albany Medical Annals:

Dr. Philip T. Heartt, of Waterford, died August 8, 1887, at the age of seventy-six years. He was one of nine children, all of whom, as also his mother, died of consumption, excepting himself. The doctor, when seventeen or eighteen years of age, developed lung troubles, severe hemorrhages, etc., to such an extent that old Dr. Moses Hale, of Troy, told him he would be the next in the family to die. It was for this reason, subsequently, that he adopted the life of a country physician, and with his horse and saddle-bags roughed it in the neighborhood of Melrose. His health began to improve, and remained remarkably good until about the early spring of 1881, when he began to have trouble by the frequent desire for urinating. In conversing with him on the subject, I suggested an examination of the urine, which I found loaded with sugar and of a high specific gravity. His weight at this time was about 225 pounds. The ordinary regulation of diet was pursued. The remedies which he had the most faith in for the relief of his disease were Bethesda water and rhus aromatica. In the spring of 1883 he seemed very much better, the specific gravity of the urine being nearly normal and there being but slight trace of sugar. He had become much emaciated, his lightest weight being 145 pounds. His symptoms were those commonly found in diabetes, the most annoying being muscular weakness, difficulty of speech at times and double vision. On the 9th of July, 1884, he developed acetonæmia. He was for a number of hours in a comatose state and his death hourly expected. He, however, regained consciousness, and later had a slight attack of pneumonia, from which he entirely recovered. Somewhat more than a year ago he had a similar attack, but for a shorter duration. For a

long time past, the urine, when tested, has contained no sugar and the specific gravity has been about normal. On Saturday he had a great deal of nausea and vomiting, which yielded to simple treatment. On Sunday morning he had an attack which so alarmed his family that they sent for me, thinking that he was dying. When, I reached him, however, the immediate danger had passed. It consisted of a spasmodic condition something like choking. On Monday, August 8, he seemed in every way better, and about 6:30 P. M. he had risen from his chair to void urine. When he was assisted back into his chair, he straightened out as he had the previous night, made a noise as of choking, and was dead.

ROLAND H. STUBBS.

DRUGS AND GROCERIES.

REXFORD FLATS, N. Y., August 9, 1887.

Editor of Albany Medical Annals:

Dear Sir—In 1848, I called on Dr. Henry Reynolds, at his office in the town of Wilton, eight miles northeast from Saratoga Springs. His office was located in a small town—Doe's Corners. I noticed that he had quite a drug store in his office, and I remarked that it must be quite an addition to his income. His reply was that it had been formerly, but that the stores had appropriated his business and that it was no longer a source of profit.

When I settled here, forty years ago, I put in my office a stock of drugs, expecting to derive some income from them, but I soon found that the store and grocery had the best of me, and I quit. At the present day the stores and groceries are supplied with a full line of proprietary medicines and also a stock of staple drugs and medicines. They have cathartic pills, cough mixtures, diarrhoea mixtures, ointments, plasters, etc., and they not only sell them when called for, but they examine the patient and prescribe for him. Twenty years ago I had quite a business on the canal, now scarcely any. The first man the boatman meets is the grocer, and if he finds out that any of his family are sick, he at once prescribes for them. From a careful observation over a long period, I think it is safe to say that in the country the stores and groceries do about one-third of the business that legitimately belongs to the physician.

When we contemplate that this drug business that the grocer has appropriated is the product of the long-continued toil of the brain and body of the medical profession, and that both physician and druggist are required by law to be thoroughly qualified and licensed for their work, and that these grocers are really making merchandise of our brains, without qualification or compensation, and to the direct injury and discouragement of the whole body of country practitioners, we think it is high time that the attention of the profession was sharply called to the facts, and that something be done to equalize things and compel men to pursue the legitimate channels of business and industry, and not encroach upon the rights of their neighbors.

Respectfully,

W. E. ROGERS.

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

EDITORIAL COMMITTEE:

F. C. CURTIS, M.D., A. VANDER VEER, M.D., LORENZO HALE, M.D.,
JNO. BEN. STONEHOUSE, M.D., WILLIS G. TUCKER, M.D.

VOL. VIII.	AUGUST, 1887.	No. 8.
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BOOK NOTICES.

TRANSACTIONS OF THE ASSOCIATION OF AMERICAN PHYSICIANS.
William J. Dornan, printer, Philadelphia.

This volume consists of nineteen papers, on general medical topics, by well-known members of the medical profession, all of them having been presented at the first meeting of this association, held at Washington in June, 1886. Some well-executed colored lithographs illustrate it. The articles are largely of a practical clinical character, fortunately not so much by the dreary recital of cases as by the summary of experience, which, coming from competent observers, is always valuable. Attention was not, however, wanting on the part of the society to the recent studies in bacteriology and pathology, and all that was presented represented the latest thought. The object of the association is set forth to be the advancement of scientific and practical medicine, and if that engrosses it there is room for good in it. Probably it is correlative to the Association of American Surgeons, from which body a communication was received proposing to form a Congress of American Physicians and Surgeons. The membership is limited to one hundred, which, with a required three-fourths' vote, will exclude diones. Among the organizing members is Dr. Henry Hun, of this city. The list of members is highly representative of all parts of the country. We shall look with anticipation for forthcoming annual publications, which, like the present volume, will doubt-

less be valuable contributions to the medical literature of this country, all papers presented being considered the property of the association, and appearing first in its volume of transactions.

F. C. C.

PUBLIC HEALTH: the Lomb Prize Essays of the American Public Health Association.

This volume consists of four papers, the result of prizes offered by Mr. Henry Lomb, of Rochester, through the American Public Health Association. The first paper is made up of two chapters on Building a Home, and Healthy Foods, the topic being Healthy Homes and Foods for the Working Classes; it is by Victor C. Vaughn, M.D., of the University of Michigan. The second paper is on the subject of School Hygiene, by D. F. Lincoln, M.D., of Boston; the third on Disinfection and Individual Prophylaxis against Infectious Diseases, by George M. Sternberg, M.D., of the U. S. Army; the fourth on The Preventable Causes of Disease, Injury and Death in American Manufactories and Workshops, and the Best Means and Appliances for Avoiding Them, by George H. Ireland, of Springfield. The articles thus brought together in one handsome octavo volume of 200 pages have already been issued separately to members of the association in pamphlet form. It may be procured of the secretary, Dr. Irving A. Watson, Concord, N. H. The practical character of the subjects and the reputation of the authors will commend it as of value to all interested in matters pertaining to the public health. With some additions, Dr. Lincoln's report has, in the main, been heretofore made public, and Dr. Sternberg's report on Disinfection, heretofore published, essentially covers the ground of his present paper. Both, however, may be prized as their latest productions on themes of which they are the most competent spokesmen. Mr. Ireland's paper has many suggestive points, but is far too short to cover the ground.

F. C. C.

ON THE PATHOLOGY AND TREATMENT OF GONORRHOEA AND SPERMATORRHOEA. By J. L. Milton, Senior Surgeon to St. John's Hospital for Diseases of the Skin, London. Octavo, 484 pages. Illustrated. Price, bound in extra muslin, \$4.00. New York: William Wood & Company.

Neisser's micrococcus of gonorrhœa is discussed in a conservative way. In regard to Watson Cheyne's view that gonorrhœa is due to the spreading of this organism, Dr. Milton says:

"Tested by the results of practice, the theory breaks down, as antiseptics have no particular control over this disease."

The greater part of the book is occupied with discussion of treatment. The inutility of many popular means is demonstrated, and the details of successful methods are fully explained.

A HANDBOOK OF GENERAL AND OPERATIVE GYNECOLOGY. Volume I., 352 pages, octavo. By Dr. A. Hegar (University of Freiburg) and Dr. R. Kattenbach (University of Giessen). In two volumes. This is also Vol. VI. of "A Cyclopædia of Obstetrics and Gynecology" (12 vols., cloth, price \$16.50), issued monthly during 1887. New York: William Wood & Company.

DISEASES OF THE FEMALE URETHRA AND BLADDER. By F. Winckel, M.D., of the Royal University, Munich; and **DISEASES OF THE VAGINA**, by A. Breisky, M.D., of the Royal University, Vienna. Edited by Egbert H. Grandin, M.D., of New York. These two treatises constitute Vol. X., 393 pages, octavo, of "A Cyclopædia of Obstetrics and Gynecology" (12 vols., price \$16.50), issued monthly during 1887. New York: William Wood & Company.

In order to ensure the completion of the "Cyclopædia of Obstetrics and Gynecology" in the early autumn, it is found convenient to issue the volumes as rapidly as they come from the hands of the translators and editor, without regard to their consecutive numbers. Volumes I., II., III., IV., VI., IX. and X. are now out. Volume V. will probably be the last one issued, in consequence of about half the volume being original by the editor, Dr. Grandin. Vol. VII. will be issued this month, and Volumes VIII., XI., XII. and V. in September and October, completing the work.

In the part on "Operations on the Ovaries" Tait's friends will think that not enough is said about him. This is probably due to the nationality of the authors. Physicians generally will covet these books—so well illustrated, so attractive in typography, so very cheap, and representing the latest and best work of their world-renowned authors.

HOW TO STRENGTHEN THE MEMORY; or, Natural and Scientific Methods of Never Forgetting. By M. L. Holbrook, M.D., editor of the *Herald of Health*, etc. 160 pages, 12mo, by mail, \$1.00. M. L. Holbrook & Co., publishers, New York.

This book has heretofore had favorable notice, and still deserves the same. The twenty-five chapters abound in practical suggestions.

EXCHANGES, PAMPHLETS, ETC.

"Catalogue of the Albany Medical College, Medical Department of Union University, 56th session."

"Association of the Alumni of the Albany Medical College. Proceedings of the fourteenth annual meeting."

"Necessity for Complete Removal of Uterine Appendages Whenever Operation is Called for." A. Vander Veer, M.D., Professor of Surgery, Albany Medical College, Albany, N. Y.

Also, "On the Results of Unilateral Removal of the Uterine Appendages" Mr. Lawson Tait, F.R.C.S., M.D., Honorary Member of the Medical Society of the State of New York, President of the British Gynecological Society, etc., Birmingham, Eng. Reprints from the *American Journal of Obstetrics and Diseases of Women and Children*, Vol. XX., May, 1887. New York: Wm. Wood & Co., publishers.

Frank O. Young, M.D., Lexington, Ky., considers Kennedy's White Pinus Canadensis (one part to four of water, injected three times a day after the passage of urine) a specific in gonorrhoea and gleet.

From Reed & Carnrick, New York—Extract from an article on "The Feeding of Infants Deprived of the Breast Milk," by J. Lewis Smith, Clinical Professor of Diseases of Children, Bellevue Hospital Medical College: "Carnrick's food contains a large percentage of the solid constituents of milk, the casein of which has been partially digested so as to resemble the casein of human milk in its behavior under the digestive ferment. The other ingredient is stated to be wheat flour subjected to prolonged baking, so that its starch is to a considerable extent converted into dextrine. This food has the advantage of easy preparation in the nursery, and easy digestion."

Also, by Dr. Malacrida, in *Gazette degli Ospitali*, Milan, 1886, on "Utility of Carnrick's Soluble Food": In a remarkable case of parenchymatous rheumatic nephritis, one teaspoonful of Carnrick's soluble food boiled in half a pint of water was given hot, as a *dernier* resort, and found to be well borne. Treated with this food alone, and a few hypodermics of pilocarpine, the patient made a good recovery. The same tolerance for this nutriment was afterwards noted in two other cases of nephritis when milk could not be retained. In two cases of ulcer of the stomach, the tolerance was better than for milk. A patient afflicted with carcinoma of the pylorus, who tolerated neither milk nor broth, nor extract of meat, nor peptones, supported very well the soluble food cooked in water, to which was added a little diluted spirit of cider.

From Battle & Co., Chemists' Corporation, St. Louis: Report of a case of acute dysentery of unusual severity treated by Papine, no other form of opium being used, by Dr. Samuel E. Woody, Prof. of Chemistry and Public Hygiene and Lecturer on Diseases of Children, Kentucky School of Medicine, Louisville.

Also: Copy of final decree of U. S. Circuit Court, Northern District of New York, in the case of Battle & Co., Chemists' Corporation, vs. Byron Fenner, enjoining defendant perpetually from infringement by the use of the name "Bromidio" or "Bromidia."

Also: Battle & Co., Chemists' Corporation, vs. D. W. Gross & Son. Decree of U. S. Circuit Court, Eastern District of Pennsylvania, July 26, 1887. Defendants are enjoined from infringement of trade-mark rights in "Bromidia."

Illustrated London and Foreign News, printed from duplicate plates of *The Illustrated London News*, and other foreign pictorials, by special arrangements with the proprietors. Vol. I., No. 1, May 11, 1887. Large royal quarto size, with two supplements, 10 cents a copy. Elegant engravings, quarto, folio and double folio size. Published by the Illustrated News Co., Potter Building, New York.

"Treatment of Fracture of Patella by Metallic Suture." Francis S. Dennis, M.D., Bellevue Hospital, New York. From *N. Y. Med. Journal*, April 8 and 10, 1886. Containing valuable tables of all published cases of wiring of patella, prepared by Dr. John A. Cutter, New York.

Braithwaite's Retrospect, July, 1887. Half-yearly parts, \$1.50; \$2.50 a year. W. A. Townsend Publishing Co., New York.

Boston Journal of Health, Vol. I., No. 1. Large quarto, 12 pp. monthly, \$1.50 a year.

Trifet's Monthly Galaxy of Music." 44 quarto pages of vocal and instrumental music monthly. \$1.00 a year. F. Trifet, 408 Washington street, Boston.

Publishers' Bulletin, New York. Vol. I., No. 2, June 15.

Medical Classics, New York. Vol. I., No. 1, June, 1887.

Chautauqua Assembly Herald. Daily organ of the Chautauqua Assembly, Chautauqua Lake, N. Y. 19 numbers in volume, July 30 to August 20.

"Some Important Points in the Treatment of Deep Urethral Stricture." F. N. Otis, M.D., College of Physicians, New York city. From *N. Y. Medical Journal*, Feb. 19, 1887.

"Practical Thoughts for Physicians." Address before the Indiana State Medical Society, May 10, 1887, by G. W. H. Kemper, M.D., Muncie, Ind.

"Parnellism and Crime." A series of leaflets, 6d. per 100 copies. For general distribution. W. Angus, publisher, *The Times* office, London, Eng. "All the charges of *The Times* consist of evidence contributed by the *rebel conspirators* themselves." (John Bright, May 10, 1887.)

"Intubation of the Larynx." E. Fletcher Ingalls, M.D., Chicago. From *N. Y. Med. Journal*, July 2 and 9, 1887.

"The Talmud of Medicine," prospectus.

"The Use of Adhesive Plaster in Orthopædic Surgery." A. B. Judson, M.D. From *N. Y. Med. Journal*.

"Importance and Value of Experimental Research." Doctorate address, College of Physicians and Surgeons, Chicago, Feb., 1887, by N. Senn, M.D., Milwaukee, Wis.

"Leisure Hour Library." The choicest works of popular authors at 3 and 6 cents each. Royal three-column octavo size. F. M. Lupton, publisher, 68 Murray street, New York.

"The Radical Cure of Retro Displacements of the Uterus, and Procidencia, by Alexander's Operation and Colporrhaphy." J. H. Kellogg, M.D., Battle Creek. From Transactions of Michigan State Medical Society.

"A Review of the Most Important Advances in Surgery, Medicine and Pharmacy in the Last Forty Years." C. W. Moore, M.D., San Francisco. From *Pacific Record of Medicine and Surgery*, July 15, 1887.

"A Unique Case of Bi-Lateral Athetosis." "The Relation of the Nervous System to Hæmophilia, Malarial Hæmaturia, etc." C. H. Hughes, M.D., St. Louis.

"On the Classification of Mental Diseases." Ralph L. Parsons, M.D., Greenpoint-on-the-Hudson, N. Y. From *N. Y. Med. Journal*, June 25.

"Health Resorts for Lung Troubles." Louis R. Ehrich. From *N. Y. Tribune*, May 22, 1887.

"Address in State Medicine—Recent Advances in State Medicine." By George H. Rohe, M.D., Baltimore, Md. American Medical Association, June, 1887.

"The Technique of Tracheotomy and Intubation of the Larynx." By Charles Goodwin Jennings, M.D., Detroit College of Medicine. From Michigan State Society Transactions.

The American Journal of Obstetrics and Diseases of Women and Children. Monthly, \$5.00 a year; 50 cents a copy. Paul F. Munde, M.D., editor. Wm. Wood & Co., publishers, New York. The August number contains 112 octavo pages, and is liberally illustrated. The first article, on "Ulcerative Lesions of the Vulva," by Grace Peckham, M.D., of the New York Infirmary for Women and Children, is illustrated by eight large wood-cuts and a full-page colored lithographic plate.

The Climatologist, Baltimore, a Quarterly Journal of Climatotherapy, Medical Geography, Epidemiology, and Preventive Medicine, will appear in September. 48 quarto pages in each number, 50 cents a year. George H. Rohe, M.D., editor.

PERSONALS.

—Dr. William Hailes, Jr. ('70), Anthony Professor of Histology, Pathological Anatomy and Clinical Surgery, Albany Medical College, was married to Miss Bertha Eugenia Deuel, of Poughkeepsie, August 17, 1887.

—Dr. H. F. C. Mueller ('87), is located at Rennselaerville, Albany county, N. Y.

—Dr. A. J. Blessing ('86), 103 Grand street, Albany. Office hours: 8 to 10 A. M., 1 to 3 and 6 to 8 P. M.

—BOOKS AND INSTRUMENTS FOR SALE.—The medical books and surgical instruments of the late Dr. W. B. Ambler ('83) are for sale. A price-list has been sent to this office. Address Mrs. W. B. Ambler, New Lebanon, N. Y.

UNION MEDICAL ASSOCIATION.—The ninety-fifth regular meeting was held in Saratoga, Tuesday, August 16. Dr. Maurice J. Lewi ('77), of Albany, is president and Dr. R. H. Stubbs, of Waterford, secretary.

Dr. F. L. Classen ('81), of Albany, read a paper on "The Treatment of Diseases of the Lungs by Pneumatic Differentiation." Dr. D. Fleischman ('81), of Albany, reported a case of abscess of the septum narium resulting from injury to the nose. Papers were also read by Dr. C. B. Herrick ('80), of Troy; Dr. R. H. Stubbs, of Waterford; Dr. T. B. Reynolds ('42), Saratoga; Dr. William H. Hodgman, Saratoga; Dr. F. L. R. Chapin ('51), Glens Falls.

Dr. Miller, of Portland, Oregon, and Dr. William Clark, of Knoxville, Tenn., were among the visitors present.

The next meeting will be in Cohoes in November.

ALBANY MEDICAL ANNALS:

A JOURNAL OF THE
Medical Society of the County of Albany.

VOL. VIII. SEPTEMBER, 1887. No. 9.

SOME PRACTICAL POINTS IN DOMESTIC SANITATION.¹

BY W. O. STILLMAN, M.D., ALBANY.
(ALBANY MEDICAL COLLEGE, 1878.)

A great many things are expected of the general practitioner, or family doctor, in our day. Not only must he be skilled as a surgeon, obstetrician, gynecologist, neurologist, pathologist, diagnostician and therapist, but he must also know something of microscopy, chemistry, laryngology, pharmacy, dermatology, ophthalmology and otology, and possess the latest views on venereal diseases and germs; and recent developments seem to indicate that it is proposed to make him a plumber as well as a sanitarian. If it be true, as calculated recently by a sanitary mathematician, on the basis of some estimates made by Dr. Henry Bowditch, of Boston, in 1876, that this country loses \$300,000,000 annually through preventable sickness, to speak nothing of the homicides, for which somebody is accountable, and the terrible suffering that so many must feel, which these figures indicate, then it may be well worth our while to become familiarly conversant with plumbing as a necessary part of general sanitary science.

¹ Read before the Medical Society of the County of Albany, Wednesday evening, March 23, 1887.

There are several practical points connected with the health of the household, preventively viewed, which have occurred to me in the course of my daily rounds, and when our indefatigable president appeared with the customary question, "Can you give us a paper, doctor?" I thought they might, perhaps, merit your attention and possibly bear future fruit.

FIRST.—Concerning the power of the City Board of Health to suppress private nuisances. I refer, of course, principally to defective drains, offensive water-closets, unsafe wells, stagnant pools, garbage, etc. It has been a matter of some interest to me to find out just what the powers of the health authorities are in such cases, and it is possible that some members of this society are ignorant of the exact status of the question as it at present stands. As physicians are called upon so continually to protest, in behalf of their patrons, against unhealthy conditions, it seems worth while to know just what power is possessed to correct nuisances.

An instance in which I entered a complaint was in a case where a typhoid fever patient, Mr. A., was next door to the house where I was in attendance on Mrs. B., and A.'s water-closet, which was very offensive (it was warm weather), stood almost against the house where my patient was. The stools from the typhoid patient were thrown into this closet just beneath B.'s kitchen windows, with the result that her house was filled with an, at times, almost unbearable stench. I was told by the employés at the health office, after an investigation, that as the closet was in good condition—*i. e.*, not full, and the drain all right, nothing could be done. This case seems to illustrate a class of nuisances in which the Board of Health feels it cannot interfere. There are scores of just such offensive and unhealthy privies near dwellings in Albany, of which complaint has frequently been made to the Board of Health, which, on sanitary grounds, should be suppressed, but which are permitted, under the law, to remain.

On May 21, 1885, an act entitled "An act for the preservation of the public health and the registration of vital statistics in the city of Albany," was passed by the legislature; (see chapter 297, Laws of 1885.) Previous to this the Board of Health had been organized, and acted under a general state law passed in 1880, and before that also under a general state law passed in 1850, but in both instances the laws were largely inoperative.

The present law seems better adapted to successful operation.

Section 2, article 4, of this act declares that the Board of Health shall have power and it shall be its duty "to receive and examine into the nature of complaints made by any of the inhabitants concerning *nuisances or causes of danger or injury to life or health* within the limits of its jurisdiction;" and that "the said Board of Health shall have power, and it shall be its duty to order the suppression and removal of *nuisances and conditions detrimental to life and health* found to exist within the limits of its jurisdiction."

Stench-laden privies, the source of offensive exhalations arising from typhoid fever stools, might be supposed to come within the meaning of this act, as at least a condition "detrimental to * * health."

An equally comprehensive phraseology is used in article 6 of the same section, where the Board is given power "concerning *all other matters in their judgment detrimental to public health.*" This would be an interesting subject to present before our slumbering medico-legal society.

The jurisdiction of the Board of Health over gross violations of sanitary conditions, as in very defective drains, or drainage, leaking soil-pipes, dangerous wells, etc., cannot be contested. In the less marked, but perhaps equally, or even more, dangerous instances which are not so patent to the judgment of laymen, the difficulty of proving the "danger" or "detriment" to health renders the law inoperative. Nevertheless, the decision is left to the Board, as it is permitted to make such special orders and regulations as, in the language of the act, it "may see fit."

In the ordinary course of procedure under the act, the Board of Health (not its officers) must determine the existence of a nuisance, and then issue its orders concerning the same for its abatement. A refusal to obey the order of the Board constitutes a misdemeanor, which brings the matter before the courts. A conviction of disobedience of the orders of the Board of Health renders liable to a fine and imprisonment, the former not to exceed one thousand dollars and the latter not to exceed six months.

The Board of Health is still further empowered, in case its orders are not complied with, to proceed to abate the nuisance and record the expense of the same against the property involved, in the county clerk's office, in which case it constitutes a first

lien, which may be foreclosed, and the property sold to satisfy the same, pursuing due course of law in regard to notices, advertisements, etc.

It is not intended to make any charges or insinuations of inefficiency against the city Board of Health or its energetic executive officer. It has had to contend with many difficulties, and is certainly far more effective than ever before.

It would certainly be very valuable, however, to have some test cases brought before the courts to secure a judicial interpretation of the scope of the law governing these cases. To be sure, action could be brought by private parties under the common law, but the statute *seems* to cover the necessary ground. The law principle involved seems to be that the state should protect its citizens in health, as in other things. Individual action under the common law on nuisances often involves impracticable expense.

The SECOND matter of which I wish to speak is concerning basements. Basements, as we all know, are much used in Albany, among nearly all classes, more or less as living-rooms, frequently as work-rooms and dining-rooms, and occasionally as sleeping-rooms.

A rather casual examination of the standard works on hygiene of Parkes, Wilson, Buck, and others, fails to reveal any condemnation of basements, though the dangers arising from damp cellars and foundations are freely discussed. A not unnatural conclusion might be that these eminent sanitarians lived in an air of such hygienic innocence and purity that the possibility of the enormity of basement-living had not occurred to them to be reprehended.

The value of ground space has caused architects to plan for the occupancy of perpendicular space both above and below the surface of the earth. In very few houses is the house protected from earth-damp, whether a cellar or basement intervenes. Every physician recognizes the danger arising from cold and damp, not to specify from noxious exhalations also. Rheumatism, consumption, malaria, neuralgias, etc., are frequently produced by such conditions.

Humanitarians and philanthropists have painted the pitiable horrors of poor wretches living in cellars and dungeons. Are not many modern basements practically just as objectionable and injurious?

Modern basements are usually damp. Water is frequently, in our clayey soil, found standing beneath the floor. There is commonly little air-space, the floor being laid almost upon the ground. The ground beneath the floor is almost always found damp, as far as I have observed, and this is due to the facts that (a) it being lower than the surrounding surface, it receives some surface drainage; (b) it often dips far enough down to encounter the subsoil saturation or currents; (c) because it is improperly drained, if drained at all; (d) it is often subject to the leakage of broken or defective drains, cesspools, etc. From these facts it follows that, first, area-ways or air-spaces should be constructed around the outside walls of basement houses down to the level of the basement floor at least, and these should be properly drained; second, ventilated air-spaces should be allowed under basement floors, and the house should be isolated from the earth-damp and subterranean air currents, by having damp-proof courses¹ laid in the foundation walls, and then by having the surface of the earth under the floors covered with a layer of concrete, at least six inches deep (so say excellent sanitary engineers), and preferably covered with a coating of Portland cement or coal-tar. This keeps out vermin as well as damp, and effectually shuts out dangers from leaking sewers or drains. Third, the foundations of a house, if in a damp soil, should be drained; and, fourth, the main soil or drainage pipes, which are frequently laid under a house, should not be constructed of tile, brick, etc. With so many joints, leaks and settlings are apt to occur. Well-prepared cast-iron pipes are the safest and most durable, as demonstrated by recent experience.

The above precautions guard a basement against dampness and also against foul air, coal-gas, effluvia from privy wells and cesspools, sewer-gas and the various exhalations of a not infrequently filth-sodden soil; and an unhealthy basement usually means an unhealthy house. Polluted air is sucked all over the house by the rise of the heated air from the basement.

If we must have basements to live in, some such precautions should be enforced. But, for one, I wish to record my earnest protest against the modern basement, or living-cellar. A well-ventilated basement is almost an impossibility, from its low level. I have seen a great many cases of sickness which seemed to me due to basement-living, and many cases of tuberculosis

¹ An ordinary brick is capable of holding about a pint of water.

contracted there. The last is particularly noticeable among servant girls of foreign birth. In my experience, it is rare to find a servant girl living and working in a basement who has good health, though previous to coming to this country or subjecting themselves to such conditions they commonly enjoyed the best of health. Many people will have periodical attacks of sickness, following a season of work in a basement, with the greatest regularity.

I think if we, as physicians, should protest against the basement abuses that house-builders might in the future more frequently modify their plans and extend their houses more on the depth of their lots, thus affording room for dining-rooms and kitchens above ground, and granting houses cellars—a luxury and safeguard which is of the utmost value.

The THIRD subject which I wish to mention relates to the fresh-air supply for heaters. Almost any source of supply seems to be thought good enough. The supply pipe which furnishes a house with its pure oxygen often gathers its supplies in a cellar, basement or kitchen, instead of out of doors. When it is obtained from the external air, it frequently opens on the street near the level of the ground—a point where most persons would strenuously object to breathing long, for obvious reasons. When the cold-air box looks upon the rear yard, it may open near the mouth of a drain or cesspool. Its location is seldom ideal. Now, how easy and at what slight expense the best attainable supply of fresh air can be procured by extending the cold-air box up the outside rear wall of the house fifteen or twenty feet, if you choose, and getting the purer upper air. The box works just as well, and the expense is relatively trifling.

I had meant to say something about boiled and filtered water, and some interesting sanitary statistics relating to the electric house-light, which is about to be introduced here, but I fear I have already consumed too much time.

There is, however, a FOURTH, and last, practical point on which I wish to say something. It relates to waste-pipe traps and plumbing in general.

It is well-known that even the virtue of waste-pipe traps can be tampered with, and that entrenched behind the most redoubtable safeguard of this nature the house owner is not by any means impregnable to his dreaded hobgoblin, sewer gas. It is but a short time ago that it was thought sufficient to say a house

had a good drain, then the *sine qua non* became some sort of a trap superadded; and now it is found that a trap must be properly ventilated, or, between siphonage and back pressure, its utility is apt to be destroyed. The best traps cannot guard against failure by evaporation, and some elaborately conducted experiments at the Smithsonian Institute, Washington, show that no patent or other traps can protect against siphonage or back pressure without ventilation. This is true as regards the siphon, midfeather, flap or ball traps, and all others are merely modifications or amplifications of the principles represented by these.

The conclusions of the Washington experimenter were as follows:

1st. The seals of ventilated traps are safe against siphonage and back pressure.

2d. The seals of unventilated traps are never safe from siphon action or back pressure, except in horizontal pipes.

Conclusions 3 and 4 relate to mechanism and dimensions.

5th. All varieties of non-mechanical traps are more easily affected by back pressure than by siphonage.

6th. Ball traps are not affected by back pressure, but by siphonage.

Conclusion 7 relates to a special, but faulty, trap.

8th. Sewer air is more likely to enter unawares by back pressure through the seal of the trap, because the seal remains unbroken.

I think the general conclusion of most of those who have investigated the subject of traps is that the simpler the trap is the better. The more complex it is the more is it likely to accumulate filth and get out of order. An expert recently said: "Having examined, on the average, seven new traps a week for the past ten years, the writer does not hesitate to put it on record as his opinion that the simplest trap is the best, and that any complication introduced in its construction tends to impair its value."¹ The common goose-neck trap is the simplest and the one generally favored.

By the term siphonage is meant the operation of the ordinary siphon principle, by means of which a column of water in a tube or pipe can be made to flow up and over an upward bend, through atmospheric pressure, provided the terminal end of the

¹ Dr. J. Bayles, Orange, N. J.; Sanitarian, Feb., 1887.

pipe is lower than the beginning. The natural tendency of this action is to empty the gooseneck as the column of water pulls the rest after it to avoid producing a vacuum at the top of the bend.

Back pressure is liable to occur either from the generation of gases in the pipe or from wind blowing into the mouth of the sewer (as frequently occurs in Albany when south winds sweep up the Hudson). This latter is a most common cause for the presence of odors and sewer gas in our houses.

The object of ventilation is twofold: First to protect the seal in traps, and, second, to ventilate the soil-pipes, and well-ventilated pipes render failures in traps less dangerous. It has long been believed that bad air bottled is dangerous, and that soil-pipes by proper ventilation can be made reasonably inodorous and safe. Every wash-basin, sink, bath-tub, water-closet or other fixture connected with the sewer, soil or waste pipe should be separately trapped as close to the fixture as possible, and every trap should have an air-vent connected with its crown, which should communicate with the air-pipe going to the outer air over the roof. Bath-rooms and water-closets should be as clean and odorless as parlors, when good fixtures are used and proper plumbing is done.

In closing this paper, I would like to make a suggestion and urge its approval. It is that this society press the adoption by the city Board of Health of printed regulations for plumbers such as are in use in Brooklyn and Washington, and I believe other American cities. I believe it is true that Albany suffers disproportionately from zymotic diseases, and the city certainly abounds in poor plumbing. In Brooklyn the plumbing plans and specifications for new houses must be submitted to an inspector of plans, on regularly prepared blanks. If he approves of them, they may be adopted; if not, not. Furthermore, as the work progresses, it is inspected by a local examiner to see that the plans are faithfully carried out. Work can only progress on his certificate. No traps are allowed to be used in the city that have not first received the approval of the health commissioner, by an examination of a sample on request.

The circular of instructions to plumbers is invaluable, and constitutes a liberal education to that body in itself. It regulates every thing in general relating to sewers, traps, cleaning branches, air-inlets, waste-pipes, closets, vents, rain-conductors,

sinks, cellars, tanks, dimensions and material. It would be a splendid step forward in Albany if such a circular of instruction alone were adopted, with fines for plumbers and architects when rules are violated.

I hope to see the time when plumbers shall be licensed, and shall be obliged to undergo a strict examination, as with physicians, as to their intelligence and qualifications, before the custody of life and health is handed over into their hands. Obligatory attendance upon a course of lectures on sanitation in a medical college would be an excellent preparation for an examination by a commission of experts.

In spite of the utter lack of pecuniary or even honorary inducement for work in the direction of sanitary improvement. American physicians have gone steadily ahead, and the marvelous progress which has been made in this department in this country has been largely due to their unselfishness, conscientiousness and wisdom. And yet, be it said, to the everlasting credit of our plumbers, that they have endeavored, as a rule, to qualify themselves for their duties by trying to keep abreast the latest and best views of the times.

[The paper was illustrated by several diagrams showing the principles involved.]

DISCUSSION.

Dr. VANDER VEER said that the problem presented to the Board of Health was complex. The owner of a lot has the right to place a privy within eighteen inches of a mansion, provided the drain is kept open. An interesting case, which had puzzled the Health Board, occurred in one of the wealthiest sections of the city. Complaint was made of a vile stench arising from the cellar. The drain of an adjacent house was found imperfect under the sidewalk. This was remedied, but it did not abate the nuisance. Finally the cause of the trouble was found five houses above. There was an old disused cistern, into which, when the occupants had moved into the house and had the plumbing looked over, the plumber had turned one of the water-closets. It drained well, but when it rained the contents were carried out of the waste pipe, which was broken, and into the cellar. The Board of Health were considering the question of publishing regulations.

In reply to a question of Dr. Stillman, Dr. Vander Veer said that the Board of Health was empowered to close up privies if they were detrimental to the health of the neighbors. In Martinville they had done so, and expected to assess the property, and the property was being sold for back taxes. Wells and privies ought to be abolished.

Dr. CURTIS said: It is perhaps too often forgotten that the most important part of a house, as regards perfection of its system of sewerage and

drainage, is the lowest story. A fault on the top floor might be productive of little harm, but in the basement it is quite certain to affect all the occupants. A closed house is like a chimney; bad air is drawn from below up. Consequently greater care should be used to make the fixtures and waste-pipes perfect down stairs than up; the reverse is more common.

The possibility of the air of a house being rendered impure from the soil about it or upon which it is built is also very generally overlooked. If the level of the ground water is high and the soil defiled, the air of the cellar is certain to be impure by the percolation of this filth-laden moisture into it, unless means are used to prevent its entry. This is a frequently-found cause of diphtheria, and very likely of consumption as well, and possibly other diseases. Even on a soil naturally dry, in an old city like Albany, there is always risk of this sort from blind or leaky drains and cesspools which abound everywhere beneath the surface. There are few houses that have any protection against ground water. Something can be accomplished by drain tile to carry off any moisture from about the house, but there should also be a covering over the floor and sides of the cellar or basement of some impervious material. Cement has been used, but it is by no means impervious; in the Capitol investigation, ground water was found making its way through nine feet of cemented masonry. My attention has been attracted to asphalt for this purpose, and it seems in every way good; I think it ought to be applied over the underground part of every building.

As to sewerage system of a house, the great evil appears to me to be a lack of simplicity. I would have an iron pipe running from the street sewer through and above the roof in the straightest course possible. Connected with this I would have the fewest possible fixtures, all trapped; there should be no bed-worn basins and not a single connection anywhere that was not needed. All these I would cluster as closely as possible about the main pipe, and all should, if possible, be exposed to ready inspection. Elaboration, next to poor work, has been the great evil of house sewerage systems.

Dr. BENDELL also spoke upon the subject, and moved that the matter of the issuing by the Health Board of regulations for plumbers be referred to the Committee on Hygiene and to Dr. Stillman. Carried.

DIPHTHERIA AND HYGIENE.¹

DISCUSSION.

Dr. F. L. CLASSEN said: August 27, 1885, I was called to see J. F., aged eleven years, who lived three miles from the city. Glands at angle of jaws enormously swollen; throat presented one mass of deposit. I put patient upon chlorine mixture, alternating with tr. ferri mur. and stimulants, also

¹ Discussion, Wednesday evening, Nov. 24, 1886, upon Dr. B. U. Steenberg's President's Address on "Diphtheria" (Albany Medical Annals, Oct., 1886), and upon Dr. E. A. Bartlett's report from the Committee on Hygiene (Albany Medical Annals, Nov., 1886), both of which were delivered at the annual meeting, Tuesday, October 12, 1886.

sprays of lactic acid and potass. permanganate. I use the spray of lactic acid in preference to any thing else, as I have seen good results from its use in several cases. By the ninth day of the disease the membrane had entirely disappeared. Patient progressed very nicely until about twenty-first day of sickness, when I noticed slight puffiness under the eyes and œdema of ankles. Examining the urine, I found it albuminous, also containing granular, hyaline and epithelial casts. Dr. Vander Veer saw the case in consultation, and recommended Basham's mixture and supporting treatment. September 21, he developed a pneumonia of lower portion of right lung, pulse intermittent, countenance waxy, extreme debility. Dr. Vander Veer again saw the case; prognosis bad. For almost two weeks he hovered between life and death, when his symptoms took a change for the better, dropsy disappeared, urine cleared up, general appearance better. He also had a pericarditis. I keep him under observation yet, as he will at times get puffy under the eyes, but it soon disappears. This case was of much interest to me, as I never had an experience with any disease that presented so many complications and still made a recovery.

Dr. A. VANDER VEER advocated a stimulating and supporting treatment from the very outset of the disease. Although many drugs have been vaunted as specifics—most recently papayotin—still no form of constitutional or local treatment has proved so. We must still regard the tr. ferri chlorid. as our most valuable remedy. The hygiene of person and surroundings is deserving of greatest attention. The temperature of the room should be maintained at about 66° F., the most thorough ventilation must be secured, and stimulants and a nourishing regimen should be pushed to ward off complications. Intubation of the larynx promises to be a valuable adjunct in many cases. Though clearly the duty of the Health Board to destroy a well-recognized focus of diphtheria, the wells, it is not an easy task, as our city Board of Health have experienced.

Dr. S. A. RUSSELL said that inasmuch as the world's best investigators were not agreed as to the cause of diphtheria, or as to the essence of the disease itself, there seemed little probability that the practitioner could throw much light on these important points. It is well known how far apart general practitioners are in the matter of diagnosis. Some find diphtheria in slight forms of aphthous deposits about the fauces, or in follicular inflammations in which the parts are more or less covered with a puriform secretion, while others recognize it only when the most severe general symptoms are present together with the membranous deposit. I know a prominent physician who withholds the diagnosis of diphtheria till the patient actually dies of the disease, then he feels sure it was nothing less than genuine diphtheria!

It appears that the so-called specifics are not of great value in the treatment of this disease. We employ antiseptics to purify the secretions and excretions, the particular form of germicide so used being according to the physician's notion. But to attack the disease as an entity and combat it with medicines does, as I believe, only handicap the patient, by adding to his already heavy burden of disease another of drugs and the work of their excretion.

Most reliance should doubtless be placed on hygienic surroundings, good nursing, nutritious and plentiful diet, tonics and stimulants. As in tuberculosis, the patient may sometimes have his resistance so far increased as to be enabled to overcome the disease, so here, if the life force can be sufficiently fortified by the means mentioned, the patient will at last overcome in most cases and recover.

Dr. F. C. CURTIS applauded the hygienic treatment suggested by Dr. Vander Veer—it is too much overlooked. Put the patient under the best surroundings as to fresh air, cleanliness and proper nourishment, and then each can use his special pet treatment, which each probably has. The reported efficacy of most of the "sure cures" would be materially lessened if credit were duly given to the effect of hygienic care.

Much difference of opinion exists as to what is to be called diphtheria, some admitting the diagnosis only when cases are of sufficient severity to prove fatal; others we hear of who call every case of sore throat with deposit diphtheria. There are, without doubt, mild expressions of the disease in persons lightly susceptible, for they are met with in epidemics, and even in the same family mild and severe cases are seen side by side; cases without throat lesion, but showing the constitutional symptoms, along with well-marked cases.

There seems reason to believe, from clinical observation, that different "filth" diseases may arise from the same source, which would suggest the possibility, in connection with a discussion of the germ origin of these diseases, that from a common and perhaps benign form of germ growth there may develop, under varying conditions of their environment one or other of the germs of diphtheria, scarlet fever or typhoid fever. There seems good reason to believe that the matter of environment has as much to do with the question of the germ origin at least of this class of zymotic diseases as has the identity of the germ.

Dr. STILLMAN: I was very much interested in listening to President Steenberg's report of his cases of diphtheria. To my mind, the conditions in which he found his cases placed were such as might be called classical, as far as the causation of the disease is concerned. It is regretted that there are in Albany so many sections of the city which are unsewered and render our citizens so liable to this and other filth diseases, and that our authorities permit the use of so many contaminated wells in obedience to public clamor. False notions of municipal economy should not allow the sacrifice of the lives of scores of our inhabitants through want of proper drainage. All public wells in large cities should be closed. They have been demonstrated over and over again to be prolific sources of contagion. Thanks to our new Water Commission, there seems every probability of our now having a reasonably pure and healthful water supply.

I cannot refrain from referring to the experiments which have of late been made in Detroit, in connection with the stamping out of diphtheria and scarlatina in that place, through disinfection of the public sewers by means of sulphurous acid. Their results have been most encouraging, and should certainly warrant other large cities in trying a similar means when afflicted with epidemics of similar virulent diseases.

It seems that the medical profession, at least its more progressive members, are tolerably united as to their methods of treating diphtheria. The tincture muriate of iron seems generally recognized as possessing special virtues in this disease. This, together with local disinfection of the throat and nose by means of such disinfectants as chlorine water, peroxide of hydrogen, carbolic acid, etc., and the use of a generous supportive diet, comprise the common treatment of this disease.

I cannot drop this subject without referring to what has often been a cause of complaint before the local Board of Health and in the Society. I refer to the stagnant and poisonous pool of water at the West End, near the intersection of Livingston and Watervliet avenues. Houses where diphtheria has raged drain into this pond. Children play around its shores and in its waters. The result is that nearly every household in the vicinity which contains children has been visited by this disease. It is a constant menace to those living in that part of the city. At present preparations are being made to cut ice from the pond by a local dealer. As I understand that the ownership of the pond rests with the city, it is a nuisance which should be immediately suppressed.

The Committee on Hygiene deserve commendation for their activity and for the excellent suggestions in their report. I coincide with all of these, and wish they might be read in every home in Albany, with the exception of the one recommending the conversion of the Martinville gully into a public park. It is not and probably never could be made to be a healthful spot. It seems to me that places for public resort and breathing spots should be selected with a view to sanitary advantages. There seem to me difficulties in the way of the proper drainage and care of this locality for such a purpose. A huge sewer runs under what would be, I suppose, the bottom of a lake, and this is liable at any time after a heavy storm to burst and convert such a body of water into a huge cesspool. It seems to me an unwise suggestion.

GALL-STONES.¹

DISCUSSION.

Dr. S. B. WARD: The presence of gall-stones is not always known during life. He had seen two cases illustrating this fact during the present winter. In one case there were found at the autopsy three large stones, with facets, filling the entire gall bladder. The patient was 80 years of age, had been attended by the same physician from childhood, and relatives and physician said that nothing had ever occurred to suggest the presence of such a condition. The other was a similar case, but the history was not so accurate.

As to treatment, it is agreed that in a large number of cases the acid or alkaline treatment is effective. In the case of a clergyman who had numerous attacks during sixteen or eighteen years, and who was incapacitated from preaching, Dr. Vander Veer, who saw the patient with him,

¹ Discussion on paper read by R. H. Sabin, M.D. ('56), of West Troy, before the Medical Society of the County of Albany, Wednesday evening, February 16, 1887.

suggested the alkaline plan of treatment (Sod. bicarb., gr. x, three or four times a day). He improved rapidly, and in two or three years was well and strong. It is only necessary to make urine feebly alkaline. Ulceration and peritonitis occur frequently. The diagnosis is easy.

At an autopsy last week there was found perforation of the vermiform appendix. He saw the patient on Monday in fatal collapse. There was general peritonitis. There had been jaundice on one or two occasions, but no history of the passage of gall-stones. There were two perforations, through one of which one of the three gall-stones projected. The concretions did not present all the appearances of gall-stones, and microscopical examination showed no cholesterine.

Dr. R. H. SABIN gave the history of a patient who had had several attacks of biliary colic. The pain is characteristic, and can never be mistaken. After a time he became jaundiced without pain, and coma and death supervened. At the autopsy no gall-stones could be found, but there was complete closure of the ductus communis choledochus, due to inflammatory thickening.

Dr. P. J. KEEGAN: The size of the stone is of great importance. If it is large, it is apt to become engaged. Dr. Keegan exhibited some very interesting specimens—a collection of 514 stones and some sand passed by one individual; an encysted sac of gall-stones and gall-bladder; a round gall-stone and also inspissated bile. In one case inspissated bile was passed as large as the excrement of the rat—a cheesy, white mass. In some cases alkaline treatment, in others acid treatment is preferable.

Dr. S. R. MORROW said he did not know how large a stone might be passed. In a patient, a lady aged 75 years, there was a violent attack of biliary colic. There were no symptoms of perforation, but collapse was due to the pain. On the day after the pain she passed, per anum, a stone as large as the end of the thumb. Perhaps it was a fecal accumulation. It was not examined by section.

Dr. A. VANDER VEER said that twelve years ago, at the request of Dr. Devol, he made a post-mortem examination of a lady, 60 years of age, who had died suddenly and unexpectedly. She was conscious until a few minutes before her death. Dr. Devol had treated her for a number of attacks of biliary colic, and treated her for a like attack six or eight hours previous to her death. There were found two stones in the gall-bladder and one in the cystic duct. There was no evidence of disease of other organs. On investigation he was not able to discover in the literature on the subject much with reference to sudden death. He has observed in autopsies and in his numerous specimens marked difference in the appearances of the concretions. Those in the hepatic duct appear dark green and rough. In the gall-bladder they are yellowish or there is an excess of cholesterine. A pure white gall-stone is rare. One that Dr. Sabin exhibited was small and white. Dr. Vander Veer has in his collection a white stone larger than the end of the little finger.

The alkaline treatment in some cases is a failure. Pure olive oil, in some patients, relieved where this plan of treatment failed. The acid treatment is often effective. Jaundice is not necessarily present. In fifty-two cases

of operation on the gall-bladder by Tait, nearly one-half were not jaundiced. Thornton also refers to this fact. Harley has written an article on sounding for gall-stones with a small needle, and in one or two cases the procedure was successful. He was of the belief, though he had no authority for it, that gall-stones in the hepatic duct or in the liver were those acted upon by olive oil.

A CASE OF CONCRETION, COMPOSED OF BERRY SEEDS AND FÆCAL MATERIAL, IN APPENDIX VERMIFORMIS, WITH CONSEQUENT ULCERATION PERFORATION, PERITONITIS AND DEATH—AUTOPSY—REMARKS.

WILLIAM H. CRAIG, M.D., ALBANY.

[FOR ALBANY MEDICAL ANNALS.]

The following case may be found worthy of record, from the fact that it is a typical case of the class to which it belongs, and also from the fact that a differential diagnosis, positive in character, could only be made so late in its history as to preclude the possibility of making a successful abdominal section.

J. C. C., aged 42, weight 205 pounds, height 5 feet 8 inches, first complained on Friday afternoon, July 29, 1887, of diarrhœa, which set in about 6 P. M., and for which he received treatment at a drug store. All further movements from bowels were checked but later in the evening patient felt nauseated and restless, but suffered from no pain, nor did he vomit. It was developed later in the history of the case that patient had eaten *heartily* of red raspberries at each of the three daily meals for several days previous to attack, and in the first discharges, as well as in the watery alvine dejections which came away as the result of the enemata large numbers of their seeds were found.

During the morning of Saturday, July 30, patient had a feeling of distress about the bowels, was uneasy and anxious, but kept about his work until 4 P. M., when sharp colicky pains set in, in the abdominal region, which could not be localized, and were almost immediately followed by emesis and great thirst. Contents of the stomach with bilious matters were thrown up. First saw patient Saturday evening, when, these symptoms continuing, anodynes were prescribed, under the influence of which patient passed a fairly comfortable night, sleeping six or seven hours.

Sunday, July 31, 9 A. M., temperature of patient 101.8° F., pulse 102; continued to vomit bilious matters, together with all food taken, and patient complained of ill-defined abdominal pains. Physical examination showed some tenderness on pressure over abdomen, tympanites on percussion, no localized pain, no localized hardened mass. Diagnosis, intestinal obstruction, location and character *sub judice*. A hot-water enema brought away a large number of berry seeds, with little or no fecal material. Additional treatment consisted of stimulants and anodynes. 9 P. M., symptoms continue, emesis of bilious matters, tympanites more marked, belly more prominent, temperature 103° F., pulse 120, weak, surface of body warm, expression (facies) anxious, patient restless, but suffered no acute pain. Another hot-water enema brought away only a few berry seeds. Anodynes and stimulants ordered for the night.

Monday, August 1, 10 A. M., temperature 103.8° F., pulse 120, surface of body still warm, tenderness over bowels had disappeared, increased distension of abdominal wall. Patient restless, vomited occasionally during night and morning, occasional attacks of singultus. Treatment continued. 9 P. M., same symptoms, same treatment.

Tuesday, August 2, 10 A. M., patient in about same condition as on previous evening, increasing restlessness, powers of life failing, temperature 103° F., pulse 124, breathing thoracic, about 40 per minute. A consultation was held with Dr. Vander Veer at 7.30 P. M. Tympanites over whole of abdominal region, abdomen prominent, some tenderness in right iliac fossa, mind clear, pulse rapid and feeble, temperature 103° F., expression anxious, extremities now cold and body covered with cold sweat. Bilious and stercoraceous matters still vomited, singultus. Diagnosis, intestinal obstruction, with probable location about cæcum and beginning of ascending colon. Ordered tincture of digitalis m. viij and whiskey every two hours, alternating with champagne and "matzoon," together with sufficient morphine hypodermically to keep patient quiet. Injections continued.

Wednesday, August 3, 8 A. M., saw patient again with Dr. Vander Veer; exaggeration of all the symptoms, respiration thoracic, 40 per minute, expression (facies) still anxious, extremities cold, etc. 9 P. M., saw patient with Drs. Vander Veer and Ward in consultation; patient's condition rapidly becoming worse, delirium, collapse, respirations 40 per minute, pulse weak

and rapid, no amelioration of other symptoms. Death being imminent, abdominal section was advised as a last resort, but patient died at 11 P. M., before preparations for operation were completed.

Post-mortem examination 11 P. M., Thursday, August 4, twenty-four hours after death. Present, Drs. Vander Veer, Ward, W. H. Craig, Marselius, J. D. Craig and student Smith. Abdomen greatly distended, the skin being drawn nearly as tight as a drum-head, somewhat prominent about umbilicus and flattened in region of ascending and descending colon. Heart, lungs, liver, spleen and kidneys normal. Small intestine very much distended with gas, with a few bands of recently effused coagulable lymph found extending between more prominent loops of small intestine in middle line. Other portions of intestines normal, except those which lay in right iliac fossa. In this fossa, several layers of small intestine, somewhat distended with gas, together with adjacent portions of cæcum and ascending colon, were matted together and covered over with a large layer of recently effused fibrinous exudation to the depth of about one-sixteenth of an inch, accompanying which were the other evidences of acute local peritonitis; effused serum was also found in the abdominal cavity. In vermiform appendix, one-half inch from its point of junction with cæcum, was seen a recently formed perforating ulcer, through which some of the contents of the appendix had escaped into the peritoneal sac. A sloughing mass of tissue, which extended into cæcum, was found surrounding this ulcer. A concretion, fully an inch in length and taking the form of the cavity of appendix, afterwards found to have been composed of berry seeds closely packed together and held in place by mucus and faecal material, and stained brown by bile pigment, was removed. This concretion thus made up, together with the recently formed ulcer and its consequences, fully explained the symptoms of the case and justified the treatment. [Had an operation been done, it would have been impossible to have tied the stump of the appendix, by reason of the sloughing condition of the neighboring tissue, and would have necessitated the making of a section of the cæcum, a procedure that would have been quite impracticable.—A. V.] J. D. C.

ABSTRACTA.

AMERICAN SOCIETY OF MICROSCOPISTS—ANNUAL MEETING IN PITTSBURG.— * * The tenth annual meeting, which closed to-day, fully maintains the high character of the preceding conventions in the number and value of papers presented and in the beauty and perfection of the exhibit of objects and of apparatus. It is the peculiar privilege of those who attend these meetings to observe in these superb exhibitions the high tide now attained in the application of art to science in refinement of workmanship and delicacy of manipulation. President Rogers says that this volume of transactions will be the most valuable ever published. In contrast with the perfected instruments of the present age, the attention of the society was directed to a primitive microscope of the date of 1743, which was exhibited, and attracted especial interest because of the fact that it had at one time been presented by Linnæus to Jussieu.

APOCHROMATIC OBJECTIVES.

The modern instruments included a fine display of lenses made of the new and nearly perfect achromatic glass invented by Professor Abbé, of Jena. The glass has been already known for three or four years, but has not till lately given satisfactory results on account of its softness, brittleness and liability to decomposition. These difficulties, however, have recently been overcome by Zeiss in Germany, and by the Gundlach Optical Company at Rochester, N. Y. The latest lenses of these makers were on exhibition, and gave very beautiful definition with high powers. Some of the technical details of his work were given in a paper of Ernst Gundlach—read by Turner—entitled "Apochromatic Objectives." It will be seen that he uses an unfamiliar term, and one which it is to be hoped will gain no recognition. "Apochromatic" is certainly not coined in accordance with the usual and proper meaning of *apo* in composition, and the old and established word "achromatic" is still the only proper one.

This subject was reopened on the last day of the session, when Dr. Detmers read a paper on "Zeiss's Apochromatic Objectives." He related some comparisons made by him between Zeiss's and Tolles's objectives, in which he considered the latter to have the advantage over the former in every respect. This brought many of the members to their feet in defence of Zeiss. Dr. Burrill stated that he had examined a Zeiss objective only last night, in company with Mr. Spencer, and that Mr. Spencer frankly admitted the superiority of Zeiss's lenses over his own, so far as regards the elimination of chromatic interference.

The annual display of

MICROSCOPIC OBJECTS

was this year accredited to the Iowa City Microscopic Society, the members of which society vied with those of the American Society of Microscopists in the number and excellence of their exhibits, and the usual throng of visitors besieged the microscopes all the evening. Diatoms, butterfly scales, pollen grains, crystals of santonine, quinate of quinine, a section of Jumbo's toe-nail, moss, bacteria of various kinds, diamond beetles, polycystina shells, sections of muscle, tooth and brain tissue, fresh-water sponges, the breathing apparatus of a water beetle and embryo of a chick were among the noteworthy still objects, in addition to which was quite an array of living organisms, infusoria, asplanchna, embryos of snails, circulation of blood in a frog and that of sap in a water plant (the latter being technically called cyclosis, however, not circulation). Perhaps the most interesting feature to microscopists was the severe test successfully applied to a new lens of Spencer, ground from glass recently invented by him, and apparently rivalling the Zeiss glass above mentioned. With this instrument the striation of *amphipleura pellucida*, 100,000 to the inch, was very clearly defined. * * *

PROFESSOR ROGERS'S ADDRESS.

Tuesday evening was devoted to the annual address, by President William A. Rogers, of Waterville, Maine, which gave the results of numerous experiments on the rate of expansion of glass and metal bars between limits of temperature—5° and 95° Fahrenheit, or the full range of ordinary climatic changes, the object being to provide a better substitute for the mercurial thermometer, which becomes untrustworthy at low temperatures, and is subject to several drawbacks at all temperatures. * * *

At the reception in the evening, following the opening address, Dr. Macintosh exhibited his ether-oxygen light, with stereopticon, showing clearly a variety of objects, of which I should mention the living larva of the mosquito, with distinct view of the circulation of the blood.

THE SUBJECT OF BACTERIA.

The important subject of bacteria was not neglected. Professor T. J. Burrill presented a phase of the subject which has heretofore been almost overlooked—that of bacteria which cause disease in the vegetable kingdom.

It will be remembered that Professor J. C. Arthur led off in this direction last year, at the meeting of the American Association for the Advancement of Science, at Buffalo, in a paper on the pear blight, which was very favorably received.

Professor Burrill's studies have been made upon the bacterium which causes the blight on broom-corn and sorghum, making the red blotches often seen upon brooms. The annual damage to

these two crops in the United States by this blight is not less than \$500,000, at the lowest estimate. The experiments were fully detailed, which showed conclusively that the disease is caused by a bacterium.

The professor regards these experiments as cumulative proof of the effect of bacteria in causing disease in animals, although he says that this theory has already been so fully proven as to be beyond the pale of discussion.

The method of bacterial action, however, is still obscure, and these researches should aid a solution of the problem. The bacteria under consideration are themselves colorless, and the red discoloration of the leaf is caused by a chemical change in the substance of the cell tissue by contact with the secretions of the bacteria. Healthy plants were infected with the blight by smearing the leaf, either on the upper or under side, with the culture fluid containing the living bacteria, while the sterilized fluid, though freely applied, proved innocuous to the plant.

This refutes the theory recently propounded by Dr. Salmon, that the poison of the sterilized fluid is a cause of disease, as Dr. Salmon thought he found to be true in experiments on the swine plague.

The red discoloration of broom-corn or sorghum leaves could be clearly distinguished after an interval of forty-eight hours from the application of the disease germs, the first appearance of discoloration being round spots at the *stomata* of the leaves. Thus it appears that disease will fasten upon the most healthy and vigorous plant, as well as upon the feeble.

We may reasonably infer that the same law is applicable to diseases of animals; and immunity from contagious diseases must be sought in destroying disease germs or in keeping out of the way of contagion.

The practical measures recommended for the plants considered were burning the infected stalks, and rotation of crops, as it was not found that these bacteria cause a blight on wheat, corn or oats.

Dr. Detmers read a paper by his pupil, Dr. Mark Francis, on "Foot-rot in Sheep," which is caused by a bacillus. A photograph showed some of the bacilli, which resemble those of typhoid fever. As a result of these investigations, a better remedy has been discovered, namely, the liquid subacetate of lead, which has already been used with success.

Dr. George W. Lewis's paper on the

FALLACIES OF BACTERIOLOGICAL RESEARCH

was read in his absence by Dr. Fell. In this paper he rebuked the socialists, who attempt by hasty and imperfect methods to overthrow the work of careful observers, like Koch, in regard to the bacillus of Asiatic cholera. A large part of the paper was devoted to the *bacillus tuberculosis*, and called out considerable

discussion. Drs. Fell and Detmers advocated more attention to the microscopic examination of bacilli, without awaiting the slow result of culture in the culture-tubes, which might not lead to any final result till after the death of the patient.

EFFECTS OF ELECTRICAL CURRENTS ON ANIMALS.

Dr. George E. Fell made some observations on the effects of powerful electric currents on the tissues of animals. The experiments were performed at Buffalo, where the practice now prevails of killing impounded dogs by electricity. The current causes instantaneous death. To determine whether the effect is truly instantaneous or not, animals were placed under the influence of ether or chloroform, and the heart exposed. The passage of the current caused instant stoppage of the heart's action. The certainty, rapidity and painlessness of this method admirably adapt it to use in the execution of criminals.

Professor S. H. Gage read two papers by himself and one by his wife. In his first paper he recommended a uniform standard of tube length by the opticians of the world. In his next he gave a method of computing the number of trichinæ in a piece of meat. Sometimes he had found over two million in a pound of meat.

Mrs. Gage's paper was on

THE ENDING AND RELATION OF THE MUSCULAR FIBRES IN THE MUSCLES OF MINUTE ANIMALS.

She has discovered, contrary to previous teachings of histologists, that the fibres in long muscles do not extend the entire length of the muscle, but bifurcate and anastomose, so that all long muscles consist of a series of successive fibres not exceeding forty millimeters long. Investigating farther in the case of mice, moles and sparrows, she found the same system prevailing even in the short muscles of those small animals. The drawings by Mrs. Gage, and slides shown under the microscope by the professor, give so clear a view of this structure that it is remarkable that histologists so eminent as Koelliker and Flint should have failed to detect it.

Professor Gage also read papers by his pupil, Boardman L. Oviatt, on the "Cardiac Muscle Cells of Man and Other Mammals" and on "Permanent Potassium Hydrate Preparations." These were quite technical, but were commended as showing good work.

Representatives of Cornell have indeed been prominent at the meeting. Still another of Professor Gage's pupils furnished a paper on "Tapeworm: Methods of Preparation for the Microscope and Museum," by J. M. Stedman, read by Professor Sargent. The injected specimens shown were beautifully prepared and mounted.

But in this age of co-education, although the young ladies of Cornell were not heard from, a student at Columbus, Miss Freda Detmers, contributed a paper on the

COMPARATIVE SIZE OF BLOOD CORPUSCLES OF MEN AND DOMESTIC ANIMALS,

which was read by her father. After long study, including laborious and careful measurement of thousands of corpuscles of dogs, mules, rabbits, cats, calves, horses, she was obliged to admit that no solution had yet been reached of the problem how to distinguish human corpuscles from those of the dog, especially of a young dog. Dr. Updegraff, years ago, thought he had succeeded in so doing, but the American society refused to sanction his claim.

Dr. Reeves, as usual, instructed the society in methods of making sections and mounting slides. He presented only one formal paper, however, which was read by title,

ARE LUPUS AND TUBERCULOSIS IDENTICAL?

He informs me that the position is taken that they are so, but that his judgment is based on appearance of the germs under the microscope and not on culture test.

Professor R. H. Ward, of Troy, exhibited some ingenious devices in manipulating the microscope, also a microscopic slide catalogue of his own invention. As chairman of the committee appointed to investigate the claim of Fasoldt, of Albany, to have made rulings as fine as

200,000 TO THE INCH,

he made a preliminary report, in which he said that he had been able to see clearly the lines as fine as 110,000 to the inch, and he thought he saw the lines 120,000. Fasoldt's son, who was present during the test, several times declared that he could distinguish up to 130,000 per inch, but beyond this he could not go. The finest ruling ever heretofore seen is Roberts's, 120,000 to the inch. There is some reason to believe, therefore, that Fasoldt has succeeded in making the finest rulings ever made, but the matter is still *sub judice*, and more rigid tests must be applied before making a final report. President Rogers insisted that no reliance at all could be placed on any test other than an absolute count of the number of lines within a measured space, although he stated that microscopists should feel under deep and lasting obligation to Mr. Fasoldt.

The report of M. D. Ewell, on a "comparison of Fasoldt Scale 2 with centimeter Scale A," states that it is 3.72 microns longer than the scale. Fasoldt's first scale was found to be 3.35 microns longer than the standard, so that they agree more closely with each other than they do with the original.

Professor Kellicott, the present secretary and president-elect of the society, has for years been one of the "pushers" of the society, and although he is to a great extent the life of all the meetings, he read but a single paper, "Additional Notes on Certain Species of Rotatoria." Another paper on the program,

"On Some New and Rare Infusoria," was not called up. Dr. Kellicott is undoubtedly the youngest man ever called to the presidency.

The paper of Dr. Frank L. James, of St. Louis, on "Some Experiences in Crystallization by Cold," though rather technical, might well be reported at greater length than space permits. The doctor edits a medical journal in St. Louis, and is an artist as well as a scientist. He gave an exhibition of skill in this line, illustrating the method of preparing plates for his journal. He etches rapidly, cutting off a chalk surface over steel plate. Into this mold type metal is poured, and thus a stereotype is finished within a few minutes.

Dr. Seaman read a paper on "Cements and Waxes." He gives prominence to the value of Japan wax as a substitute for paraffine in preparing and preserving animal tissues.

Professor Burrill read a paper on "Erysipheæ of Illinois." These are a kind of fungus which grows upon certain leaves, and has numerous ornamental appendages, which if seen, say in birds, would be attributed to sexual selection, but Professor Burrill considers them a puzzle for evolutionists, as he can see no way to explain them conformably with this hypothesis. They are of use as parasites on hop-vine blight, which they destroy.

The following completes the list of papers read at the meeting: "A Contribution to the Life History of the Diatomaceæ," by Hamilton L. Smith (read by title); "Some Easy Methods of Testing Photographic Lenses," by Henry H. Turner; "A New Photo-Micrographic Camera," by George W. Rafter (by title); "History of My Use of the Microscope," by Dr. E. Cutter, of New York (by title).

EXCURSIONS, SIGHT-SEEING, ETC.

An afternoon was pleasantly spent in visiting the optical works of Mr. John A. Brashear, and the observatory in Allegheny City. It is Brashear who grinds the

ROCK-SALT PRISMS

with which Professor Langley's beautiful and delicate experiments on the invisible heat rays of the solar and lunar spectrum have been made. No one else in the world seems to have gained sufficient skill for this delicate work. To obtain salt crystals of the requisite purity is a matter of the first importance, and the best material yet known comes from Baden-Baden, and must be selected with great care. A really fine specimen is hard to find, and one lump not more than five inches across and one inch through was valued at \$300—at least the statement was made that Professor Langley would be unwilling to part with it for that sum, so difficult is it to find perfectly clear crystals. Specimens of delicate ruling of diffraction gratings were shown, exceeding 14,000 lines to the inch. These are to be distributed among original investigators who need such apparatus. If

they cannot afford to pay for the gratings, no price will be charged, "but," said Mr. Brashear, "if a man should come along and offer \$1,000,000 for a grating, merely as a curiosity, he could not buy one."

At the observatory it was not the fine large telescope which most interested me, but the tiny

BOLOMETER

(Greek, *bolé*, a ray), with which Langley has penetrated so far into the arcana of the dark region of the spectrum. This tiny instrument consists of one or more filaments of platinum rolled to the thinness of one-thousandth of a millimeter. This instrument is exquisitely sensitive to slight radiations of heat, even at temperature below zero of the centigrade scale; and Professor Ferry stated that it would indicate within a single second an amount of heat so small that it would not melt a pound of ice in less than a thousand years. With the bolometer, Langley has extended the spectrum so far that Professor Ferry stated, showing an engraving in which the visible end of the spectrum extended about four inches, that the invisible spectrum (infra red) on the same scale would extend all around the room.

Another excursion under the auspices of Iron City Microscopical Society, of Pittsburg, was made to Braddock, the scene of Braddock's defeat in 1755, twelve miles up the Monongahela river, to visit the Edgar Thompson steel works, the largest in the world, now controlled by Andrew Carnegie. Here we saw a blast furnace which has turned out 419 tons of iron in twenty-four hours, and bears aloft the broom, significant of the clean sweep which it makes. The various furnaces controlled by this firm make a greater weight of iron and steel than the entire weight of the cotton crop of the south, or 1,800,000 tons per annum, against 1,200,000 tons of cotton raised. Thus, on the very spot made historical by that olden contest of arms, we are reminded that "Peace hath her victories no less than war."

A visit to the Westinghouse electrical works rounded off the excursionary part of the entertainment. The manufacture of dynamos is here carried forward on the same large scale usual with Pittsburg enterprises, and the visit was not the least interesting, though the journey was the shortest. To those of us who knew the Pittsburg of yore, however, the revolution from grime to cleanliness consequent upon the substitution of natural gas for coal as the fuel for manufacturing is one of the most agreeable experiences where all have been delighted. Pittsburg clean seems like the leopard changing his spots or the Ethiopian his skin, but indeed the air is hardly more impure here now than sometimes down town in New York, though a chemical analysis must, of course, show an excess of carbonic acid gas from the innumerable furnaces, even though the soot no longer darkens the sky and falls in perennial flakes.

THE NEW BOARD OFFICERS.

The following officers were elected for the ensuing year: President, Dr. D. S. Kellicott, of Buffalo; vice-presidents, Dr. T. B. Stowall, of Cortland, N. Y., Dr. H. J. Detmers, of Columbus, Ohio; secretary, Dr. T. J. Burrill, of Champaign, Ill.; treasurer, Dr. S. M. Mosgrove, of Urbana, Ohio; executive committee, C. C. Mellor, of Pittsburg, Penn., H. D. Kendall, of Grand Rapids, Mich., and R. J. Nunn, of Savannah, Ga.

The entire number of members in attendance was seventy-seven; total membership, 434, of whom fifty were elected at this meeting. Invitations were received to hold the next meeting at Indianapolis, Denver, San Francisco, Washington and Mount Park, Md. A member suggests meeting on one of the Long Island Sound steamers. The question will be decided by the executive committee some time next year. Dr. Fell gave notice of an amendment to the constitution, increasing annual dues from \$2 to \$3. This will come up for action at the next annual meeting.—*William H. Hale, in New York Commercial Advertiser, Sept. 3.*

EPISTAXIS TREATED BY COUNTER-IRRITATION OVER THE HEPATIC REGION.—Alex. Harkin, M.D., F.R.C.S. (*Lancet*), refers to another contributor's letter from Paris, April 27, which related that M. Verneuil has hit upon effective treatment of epistaxis by blistering in the hepatic region. M. Verneuil thought at first that the method was entirely his own, but bibliographical research revealed that Galen advised large cupping-glasses over the hypochondrium to arrest nasal hemorrhage. Dr. Harkin has used blisters, as now approved by Verneuil, for many years, and reported cases in illustration in *The Lancet*, October 30, 1886.

COMPOSITION FOR REMOVING INK.—In two quarts of water, previously boiled and cooled, dissolve four ounces of citric acid. Then add six to eight ounces of a strong strained solution of borax, after which the whole may be put in a bottle or suitable receptacle. Then to two quarts of water, previously boiled and cooled, add three-quarters of a pound of chloride of lime. Shake and let stand from four to six days, after which strain and add from six to eight ounces of a strong solution of borax, and place in a separate bottle.

To remove ink from paper, cloth, or other absorbent substance, the composition in bottle No. 1 is applied so as to thoroughly saturate the place occupied by ink, a blotter being used to absorb all waste moisture. The composition in the second bottle is then applied. By the combined use of the two fluids thus described, writing inks or other fluids will be immediately dissolved and removed from the paper, so that the latter may be again written on.—*Lithographer.*

PROPRIETARY MEDICINES—SHOULD PHYSICIANS PRESCRIBE AND RECOMMEND THEM?—The gist of the whole matter depends upon what is meant by the term "proprietary medicine." In its limited and best sense we understand by the term a remedy of which the ingredients and their proportions are made known to the profession, and the trade or proprietary name of which is alone protected by law.

Merck, Schering, Fairchild, Squibb, and a few others, have devoted their lives and spent enormous sums of money in making their products the purest and best that can be attained by human honesty and human ingenuity; and as a reward their names attached in *copyrighted labels* to their chemicals stand as a perpetual guarantee to the physician and patient against the fraud and greed of less honest manufacturers, and it would be a great injustice to them, as well as to the profession and public, to deprive them of this guarantee.

The most serious charge that is brought against the makers of some of the best known, most valuable and most frequently used proprietary medicines is that the formulæ given by the manufacturers are not the true ones, or, as Dr. Craighill, of Lynchburg, Va., in a paper read before the Virginia Pharmaceutical Association, at its last May meeting (published in the *Virginia Medical Monthly* for June, 1887), puts it, "a patented proprietary remedy which professes to publish its formulary *but does not.*"

But when we examine into the matter, we find the sole ground for the charge to be that when the ingredients as named are put together by the physician himself, or by the prescriptionist, off-hand, though it may be *secundum artem*, the result frequently differs very widely from the preparation which it is intended to imitate. This fact would go far to prove the charge did we not remember that in all chemical processes *manipulation* has a great deal to do with results, and that the *element of time* has a value that nothing else can supply. A mixture in which no amount of shaking will produce combination or solution off-hand, or no amount of filtration will clarify, will frequently become perfectly limpid when given the requisite length of time. We are informed by Mr. Lambert that Listerine requires eleven days in its preparation, and Messrs. Battle & Co. tell us that Bromidia, for instance, requires six days for the thorough combination of its ingredients. We have no doubt that many other such remedies require even more time for their perfection, and no amount of skill on the part of the pharmacist can possibly make up for this element in their preparation. These facts are fully recognized in France and Germany, and we find the highest class of the medical journals of these countries full of advertisements and notices of preparations exactly analogous to our proprietary remedies.—*Extract from Editorial in St. Louis Medical and Surgical Journal, Sept., 1887.*

INDICATIONS FOR NITRO-GLYCERINE.—The value of nitro-glycerine in various diseases, as angina pectoris, hemicrania, and neuralgia, and also in sea-sickness, certain forms of anæmia, etc., depends on the existence in these of an irregular distribution of the blood. This abnormal condition may be recognized by a certain grade of pallor of the skin, especially of the face, an appearance co-existent with a weak pulse and small radial arteries, hard and frequently situated at a certain depth. When, on the contrary, the headache and neuralgia occur in persons with chronic congestion of the subcutaneous vessels of the face, nitro-glycerine is contra-indicated; and similarly it should not be used in asthma when the face is congested from the effects of the emphysema. Thus it may be said that the best therapeutic results from nitro-glycerine may be obtained in those cases in which angina pectoris, neuralgia, etc., are associated with pallor of the countenance.

The condition of the pulse is the best indication for the use of nitro-glycerine and the safest guide for the determination of the time in which one should begin the cure. The smaller the radial artery is, so much the more rapidly does it dilate under the influence of the drug, and so much less are the secondary effects produced by it; on the contrary, the fuller the pulse and the more tense the radial artery, so much the less this resents the influence of it.

When the pulse is small, the usual dose of one drop of a one per cent. solution is sufficient, while if the pulse is large, two drops may be required to obtain the full effect. When the radial is soft and the pulse weak, smaller doses should be given—one-half to one-fourth of a drop. The sensations experienced by the patient, throbbing and pain in the head, as well as the distension of the radial artery under the observer's finger, should be the guide for the increase of the dose.—*Giornale Internazionale delle Scienze Mediche; Can. Prac.*

THE PULSE.—Speaking of lectures upon the pulse by a Dr. Broadbent, *The Lancet* wrote: "One has only to turn to the writings of Hippocrates to learn how closely and how accurately its (the pulse's) variations were observed, with much remarkable result in prognosis and treatment." Alas for the uncertainties of historical reminiscence! Hippocrates was a great physician, and it is generally thought safe to credit him with first knowing, in a crude way, of course, a little of every part of our great art. But Hippocrates, in fact, knew nothing of the pulse, wrote nothing about it, and quite neglected that time-honored source of professional information. Herophilus was one of the first to investigate it, while Galen erected its study into a separate science, and fixed irrevocably upon the profession the practice of fingering the wrist as part of every medical service.—*Medical Record.*

NURSE'S SORE MOUTH.—In my opinion the disease is neurasthenic in its character, evidently caused by the debility consequent on abundant lactation. I have met with many cases of different degrees of intensity, and by deduction have arrived at the conclusion that in many the whole alimentary track is involved in the ulcerative process. In one case, some years ago, I was satisfied that such was the case, the mouth being a mass of ulcers, the abdomen tender on pressure, dysenteric discharges being frequent, and the patient exhausted with an irritative fever. The usual treatment for "nurse's sore mouth," or the stomatitis of lactation, consists of the local use and internal administration of chlorate of potassium or golden seal, and the usual treatment is of no avail whatever. There is a remedy for the disease, however, as potent and reliable as is quinine in an intermittent fever, and that is the nitrate of silver in combination with opium.

R Argenti Nitratis, gr. 20 to 40.
Pulv. Opii, gr. 10.

Ft. pil. No. xl. Sig. One pill once-half hour before each meal.

This will be sufficient in ordinary cases presented for treatment, but when the system is utterly exhausted, and the whole of the alimentary canal seriously involved, it may become necessary, in addition, to remove the cause by drying up the milk, which may readily be accomplished by the removal of the child from the breast, substituting the breast-pump, and applying the ointment of belladonna and lard.—*Periscope*.

DEATH FROM POISON EJECTED BY A TOAD.—A child aged six years, while throwing stones at a toad, suddenly felt the animal spurt some moisture into his eye. There suddenly set in slight pain and spasmodic twitching of the injected eye; two hours after, coma, jumping sight, desire to bite, dread of food and drink, constipation, abundant urine, and great agitation manifested themselves, followed on the sixth day by sickness and apathy and a kind of stupor, but with a regular pulse. Some days later, having become comparatively quiet, he left his bed; his eyes were injected, the skin dry, the pulse free from fever. He howled and raved like a madman, sank into imbecility and speechlessness, from which he never rallied.—*Druggist and Chemist, Phila.*

DIET IN HYPOCHONDRIASIS.—An excessive meat diet will sometimes bring on hypochondriasis, and in this condition the ordinary rules for nervous invalids are to be changed. Hypochondriacs must be fed largely upon vegetable food, which distends the colon and causes it to empty itself. When hypochondriasis is brought on by a meat diet, it is cured by porridge and green vegetables.—*C. E. Dana.*

ALBANY MEDICAL ANNALS:

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NO. 9.

BOOK NOTICES.

DISEASES OF THE HAIR AND SCALP. By George Thomas Jackson, M.D., Instructor in Dermatology in the New York Polyclinic, etc., etc. Copyright, 1887, by E. B. Treat, publisher, 771 Broadway, New York city. Large duodecimo size, 356 pages, illustrated, \$2.75.

The author feeling the need of a book of this kind five years ago, and finding none of recent date excepting such as were more popular than scientific, began those studies which have resulted in the present valuable volume.

The chapter on the anatomy of the hair is chiefly from Waldeyer's "Atlas der Menschlichen und Tierischen Haare," Lahr, 1884, and from Unna's in Ziemssen's "Handbuch der Speciellen Pathologie und Therapie," Leipzig, 1883. The greater number of the illustrations are from the large collection of photographs belonging to Dr. George Henry Fox, who placed them generously at the author's disposal. The classified bibliography and journal literature is a very valuable appendix.

The book is of real value, and will be well appreciated by all.

SURGERY, ITS THEORY AND PRACTICE. By William Johnson Walsham, F.R.C.S., of St. Bartholomew's Hospital, London, etc. One of the New Series of Manuals for Medical Students. Thoroughly illustrated, 655 pages, cloth, \$3.00; leather, \$3.50. P. Blakiston, Son & Co., Medical Publishers and Booksellers, 1012 Walnut street, Philadelphia.

This is not intended to take the place of any of the larger treatises on surgery, but rather to supplement them and prepare

the student the better to profit by them subsequently, and as an aid in preparing for examination. While presenting the subject in as concise a manner as possible, the author does not lose sight of the principles which underlie the science, but gives the indications which should guide us in the practice of the art, rather than any detailed account of treatment. No account is given of the specialties of the eye and ear, but on other topics special prominence is given to those subjects with which every student ought to be acquainted.

The author's work is done remarkably well. Students who possess this book will find it a most valuable aid.

J. WALTER THOMPSON'S LIST OF PROMINENT MEDICAL JOURNALS, intended for the Use of Advertisers engaged in the Wholesale Trade in Europe and America.

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A peculiar feature of this catalogue is the fac-similies of the first cover-page of different journals, which have been made at considerable expense. The majority of these fac-similies are of about one-half the diameter of the original pages, and are quite attractive. The list begins with the **ALBANY MEDICAL ANNALS**.

THE PRINCIPLES OF ANTISEPTIC METHODS APPLIED TO OBSTETRIC PRACTICE. By Dr. Paul Bar, Accoucheur to Maternity Hospital, Paris. Translated by Henry D. Fry, M.D. 175 octavo pages, \$1.75. Philadelphia: P. Blakiston, Son & Co. 1887.

"While Dr. Bar is an enthusiastic advocate of the employment of antiseptics in this new field of usefulness, his teachings are conservative, and precise indications alone guide him in the practice of the method. That he has a right to his enthusiasm I believe will be apparent to any one who will read the gratifying results he has collected of the value of antiseptic midwifery.

"The rigid application of antiseptic principles to obstetric practice meets with greatest favor among the practitioners of Germany and France. The various antiseptic procedures adopted by some of the principal institutions of Europe are described in this work, and it is with the hope that some benefit may follow the dissemination of these views that I place the

book within the reach of all in this country."—*From Dr. Fry's Preface.*

Among the topics are relation of the germ theory to the puerperium (including a brief review of the germ theory and of objections, the channels by which germs are introduced into the system, conditions which favor or resist their multiplication, etc.); the antiseptic method and agents; influence of antiseptics on puerperal epidemics; hygiene of puerperium; antiseptics of different periods of labor and during the puerperium; antiseptics in catheterization, in rupture of uterus, in Cæsarian section; antiseptics to the umbilicus and eyes of the newborn, etc.

EXCHANGES, PAMPHLETS, ETC.

"The Treatment of Diseases of the Ear by the General Practitioner." A. E. Abrams, M.D. (A. M. C., '81), Hartford, Conn. From Proceedings of the Connecticut Medical Society, May, 1887.

American Agriculturist, 751 Broadway, New York city. Clubbing offer: ALBANY MEDICAL ANNALS for 1888, \$1.00; *American Agriculturist* (English or German) balance of 1887 and all of 1888, \$1.50; "American Agriculturist Cyclopaedia of Natural History," 600 pages, 500 illustrations, bound in cloth, valued at \$2.00; Engravings of Homes of our Farmer Presidents, 11x18, issued during '86 and '87, each valued at \$1.00. We will furnish all the above, post-paid, for \$3.80.

Annals of Surgery, Balliere, Tindall & Cox, London; J. H. Chambers & Co., St. Louis. Upwards of 100 octavo pages monthly, \$5 a year. Contributions from the best surgeons in the world. Abstracts of surgical progress.

The Medical Register, of Philadelphia, issued a large daily edition at Washington during the six days' session of the Ninth International Medical Congress, Sept. 5 to 10, inclusive.

The Decorator and Furnisher, 80 and 82 East 14th street, New York city. Extra large quarto, monthly, \$4 a year. James A. Robinson, president and treasurer Decorator and Furnisher Co.; A. Curtis Bond, editor; George A. Halm, art director.

The Cosmopolitan, Schlicht & Field Co., Rochester, monthly, 8vo, \$2.50 a year, with either Shannon Letter and Bill File or Sheet Music Binder (each of which sells for \$2.25), to paid-up subscribers of the ALBANY MEDICAL ANNALS for the low clubbing price of \$2. The illustrations are finer than in other literary magazines.

The Poultry Monthly, Albany, N. Y., quarto size, monthly, large illustrations, \$1.25 a year, is offered to paid-up subscribers of the ALBANY MEDICAL ANNALS at the clubbing price of \$1.00. New subscribers for next year receive the balance of this year free.

The Open Court, edited by B. F. Underwood, assisted by his wife, is published fortnightly in Chicago, and devoted to the discussion of ethics and religion. It is supported by Max Muller, Paul Carus, Moncure D. Conway, Samuel Kneeland, Robert Drummond, Edmund Montgomery, and other eminent contributors.

"Transactions of the Medical Association of the State of Missouri," thirtieth annual session, May 10, 1887. 159 octavo pages. The meeting of 1888 is to be held in Kansas City. Dr. Frank J. Lutz, St. Louis, president; Dr. W. E. Evans, Boonville, corresponding secretary.

Maryland State Board of Health, 1887. "Improved Methods of Sewage Disposal, and Water Supplies." 176 pages, large 8vo, well illustrated. C. W. Chancellor, M.D., Secretary of the State Board of Health of Maryland, Member of American Public Health Association, Fellow of the Society of Science, Letters and Art, London, etc.

"Intubation of Larynx." A. Jacobi, Joseph O'Dwyer, Francis Huber, Dillon Brown, W. P. Northrup, I. H. Hance and A. Caille. At New York Academy of Medicine, June 2, 1887. *Medical Record*.

BRIEFS AND ITEMS.

The New York State Medical Association holds its fourth annual meeting in New York, September 27, 28 and 29.

At Englewood, Ill., a society has been organized admitting any or all persons who are endorsed as qualified to practice medicine by the State Board of Health.

Dr. E. C. Spitzka, of New York, says that the report of the English Commission to investigate hydrophobia is not worthy of credence, as no proper investigation was made.

A student in the Albany Medical College, when asked how he would treat a corpulent man, replied that he had found that they usually take beer. [Said by the *American Druggist*, New York, *The Medical Age*, Detroit, and others.]

The Association of American Medical Editors gave a banquet at Washington, D. C., on Monday, September 5, to the distinguished medical editors from abroad in attendance at the International Congress.

Dr. T. K. Perry ('75), of Albany, was married to Miss Ella Chase, Tuesday, September 6, 1887. The wedding tour includes the White Mountains, a voyage from Boston to Fortress Monroe, and a visit to Richmond, Washington and other cities.

The *Virginia Medical Monthly*, August and September numbers, prints in full the paper entitled "To What Extent Can We classify Vesical Calculi for Operation?—Reports of Cases and Remarks on Different Methods Employed," by A. Vander Veer, M.D., Professor of Surgery, Albany Medical College, etc., Albany, N. Y., read at the meeting of the American Surgical Association, Washington, D. C., May 11, 1887.

ALBANY MEDICAL ANNALS:

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REMARKS ON INTESTINAL OBSTRUCTION.¹

BY S. R. MORROW, M.D., ALBANY,
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Mr. President and Gentlemen:

While casting about for a topic that might justify the remarks customary on the occasion of our semi-annual meeting, a case of great interest fell under my care, which suggested a profitable theme, as it seems to me, for our consideration.

L. C. R., male, aged three years and four months, got up on the morning of Tuesday, March 15, complaining of pain in his stomach, as he said. The pain lasted all day, varying in degree, but continuous and with occasional paroxysms of great severity, so that he rolled about in bed, drawing his limbs up against his body and crying out in great distress. During the afternoon he vomited considerable greenish fluid. His bowels did not move that day, nor had they moved the day before. Matters remaining in about the same condition, the pain and vomiting persisting, a physician was summoned the next afternoon, who gave cathartic powders, which were vomited immediately. Even water, for which the patient frequently called, was vomited. On Wednesday afternoon, however, the patient ate a little

¹ Vice-President's address, delivered before the Medical Society of the County of Albany Tuesday afternoon, May 10, 1887.

finely minced beefsteak, which he did not throw up. There was no material change the next day, save that twice the child vomited matters which, its mother said, smelled as though they ought to have passed the other way, and he also passed one very small stool, which consisted of alime, and was slightly tinged with blood.

On Friday the attending physician expressed the opinion that the child had a twist of its bowels, and that surgical aid would be necessary. I saw the child about six o'clock that afternoon, the evening of the fourth day of the attack. Examining his abdomen, I did not find it tympanitic, nor was any tumor to be felt. There was no rise of temperature, the skin was moist, the tongue lightly covered with a white coating, pulse 110, and child very quiet in the intervals of severe pain; intellect clear. Patient, when asked about it, said he had stomach-ache, laying his hand over the umbilical region, and every three or four minutes he was seized with colicky pains, causing him to throw himself from one side of the bed to the other.

Learning that enemata had not been employed, I immediately gave an injection of a pint of warm soapsuds, to which was added a teaspoonful of spirits of turpentine. Almost immediately this was rejected, bringing away considerable mucus, but no faecal matter. Although the signs of volvulus or intussusception were not clear, I decided to try the effect of an injection of air, which I made with a Davidson's syringe, pressing the nates close about the nozzle of the syringe to prevent the escape of the air. We could see and feel the large intestine expand under the pressure until the abdominal walls became decidedly resistant, the distention being quite uniform and not merely confined to the region of the colon. I continued the injection of air until the little fellow could endure it no longer, when he insisted on going to stool. Most of the air was passed off at once, but nothing else, and the abdominal walls became again soft and flaccid. After half an hour this procedure was repeated, with a similar result. I did not give any cathartics, believing that at this period of the attack their action would only be harmful.

I directed powders of $\frac{1}{12}$ gr. sulphate of morphia to be given every three hours and a turpentine enema every four hours. Next morning I found that the enemata had been ineffectual, but the pain and restlessness were gone and that the patient had

not vomited during the night, and this improved condition of affairs continued through the next thirty-six hours. Patient during this time took a little whiskey, the first nourishment he had retained. Nutrient enemata were not given, because it was with the greatest difficulty that the ordinary injections were made, and because the patient kept down liquid food after the morphine began to be given.

At my first visit I urged an operation, and on Saturday Dr. Balch saw the case with me, in consultation, and also strongly advised operative interference, but, as the child's father was out of town and would not return until Saturday night, the mother did not feel free to give her consent. Sunday morning, the apparent improvement continuing, the parents urged further delay, to which I consented, though under protest. Monday morning the child vomited again, the first time in forty-eight hours, and this continued to the end, at varying intervals, not every thing that was swallowed, however, being rejected. The child's pulse grew weaker, and signs of collapse began to appear.

At this time the parents consented to an operation, and on Monday afternoon the boy was removed to the Child's Hospital and preparations made for a laparotomy. But vomiting having again ceased, and the child's pulse improving, the parents begged for a little longer delay, and the operation was deferred for another twenty-four hours. The chief reason for consenting to these delays was the absence of the signs of peritonitis and the subsidence of the pain. Now for the first time a tumor could be felt in the right iliac region, but it was not specially tender. During Monday night the child vomited fragments of the meat eaten on Wednesday before, and the vomiting recurred frequently during the night. The pain returned, patient passed a very restless night, and by morning was much exhausted.

Monday morning at 10 o'clock, just one week from the beginning of the attack, I proceeded to perform laparotomy, with the assistance of Drs. Balch, Curtis and Vander Veer. It is unnecessary to detail the steps of the operation, which was the usual one of opening the abdomen in the linea alba, below the umbilicus. The intestines that presented in the wound were seen to be covered with a slight exudation and somewhat adherent, showing that peritonitis had set in. On introducing the fingers of my right hand, a short search in the right iliac region disclosed the cause of the obstruction to be a band of some sort,

and a mass of empty coils of intestine was also felt, which formed the swelling which was apparent during the previous twenty-four hours. As we could not determine the exact nature of the band nor expose it *in situ* sufficiently to incise it, the intestines were rolled out upon the front of the abdomen, at the upper angle of the incision. The band was adherent to the bowel nearly its whole length, was round and of the size of a quill, and was thought by all to be the appendix vermiformis. Two ligatures were passed about it, half an inch apart, to prevent fecal extravasation and hemorrhage, and the band cut between the ligatures. Another short band, half an inch long, forming a segment of the bowel a little further away into a firm, sharply angular loop, was cut without previous ligation, as it seemed very firm and fibrous. This was found at the autopsy to be a mesenteric gland, enlarged, covered with lymph and firmly adherent to the bowel at the flexure of the loop. The large intestine was empty, and the mass of empty coils was found to be the part of the small intestine below the constricting band. The patient's condition became so alarming that we spent no time in any further exploration of the abdominal cavity, but replaced the intestines as quickly as possible—a very difficult task, because they were so distended—and sewed up the wound by deep through-and-through sutures. The little patient did not rally, but died quietly after four hours.

An autopsy was held thirty hours after death. The child's father would not permit any enlargement of the operation wound, and as this was only four inches long, the examination was rather difficult and unsatisfactory. Nevertheless, the intestines were entirely withdrawn, inch by inch, but no other adhesion or obstructing band was found. The band that we cut at the operation proved not to be the appendix vermiformis, but apparently a whitish fibrous cord attached by its upper extremity to the side of the small intestine and by its lower end to the edge of the pelvis in the neighborhood of the appendix, the latter lying in its natural position. The coils of intestine held under the band were not noticed to be greatly discolored at the time of operation, except that they were congested, but at the autopsy were very dark, apparently needing but a day or two more of the strangulation to become gangrenous. The part of the intestine involved was a loop of the ileum, beginning about twelve or fifteen inches above the cæcum and extending upwards

about a foot. It is interesting to note that the patient was the subject of left direct inguinal hernia, which had appeared at the age of four weeks, but was always reducible and easily kept up by a home-made truss. A day or two before the final illness came on, the rupture had gone up, and one of the possibilities to consider was that it had become strangulated and reduced *en masse*. But no hernia was found at the autopsy, reduced or unreduced. Two of the child's brothers have hernia, as also has his mother, and seventeen of his relatives are the subjects of this affection.

I may be thought presumptuous in basing any remarks on the general subject of intestinal obstruction and its treatment upon this one case, and that an unsuccessful one, in which several of the principles I shall advocate were neglected. I can only say that my management of the case would have been different if I had been allowed to have complete control of the case. At any rate, I have distinguished company in this misfortune of failure, the mortality of operation in the cases reported being between sixty and seventy per cent. The subject of intestinal obstruction has filled a goodly space in the medical periodicals, but it has not, I believe, formed the subject of any discussion at the meetings of our society, and the report of this case I have thought might prove useful in calling attention to a very important disorder, by no means uncommon, and one that is confessedly very difficult of diagnosis and treatment. I have nothing original to offer, but desire merely to bring to your notice some of the latest and most valuable views of the best authorities in this branch of our art.

It is quite impossible at this time to give even a general account of the subject of intestinal obstruction, or of any single feature of it, nor would it be interesting, perhaps, to go deeply into detail. I would simply seek to use this case as a pretext for calling attention to the diagnosis of cases of acute obstruction of the bowel, and especially to the necessity of prompt and early treatment.

Mr. Frederick Treves, of London, has written a fascinating and most valuable work, the best of its kind, on intestinal obstruction, the opening sentence of which is as follows: "The importance of the subject of intestinal obstruction may be, in one way, estimated by the circumstance that over two thousand individuals die every year in England alone, from various forms

of intestinal obstruction, exclusive of hernia." And Leichtenstern, in "Ziemssen's Cyclopædia," calculating from statistics furnished by the Vienna and St. Petersburg hospitals, states that from five to ten fatal cases of occlusion of the intestines occur yearly among every 100,000 inhabitants. If the same ratio prevails in our country, there must be at least six deaths from obstruction of the bowels every year in our city of Albany, and yet how rarely do we hear of obstruction of the bowels as a cause of death. Indeed, this case of mine is the first of its kind reported to this society since I came to Albany some seven years ago. It is, of course, a natural tendency to suppress the report of an unsuccessful case, Treves going so far as to say that "the recorded cases after operation probably bear to those that are unpublished the proportion of one to ten, and it may be surmised that the great bulk of the unpublished cases ended in death." But a stronger reason why we do not hear more of such cases is probably the failure to diagnosticate them, many cases of this complaint being regarded as cases of peritonitis or inflammation of the bowels.

It must be confessed that the diagnosis of intestinal obstruction is a difficult matter and one that often cannot be cleared up without a laparotomy, and even at the autopsy other causes of obstruction are sometimes found that were not discovered at the operation. My object to-day is to urge the more careful attention of practitioners to this subject, and especially to insist on the value and safety of laparotomy as an aid to diagnosis.

While our limits will not permit anything like a full description of the etiology and clinical history of intestinal obstruction, it may be of interest to mention a few points. As to the varieties, Treves gives the following classification, based on pathological grounds, because our knowledge of the morbid anatomy is so much more complete than of the clinical history: "Strangulation by bands, etc., or through apertures in the mesentery, or peritoneal bands, or even the broad ligament; volvulus; intussusception; stricture; obstruction by neoplasms; compression by tumors, etc., external to the bowel; obstruction by gall-stones and foreign bodies; obstruction by enteroliths; obstruction by fecal masses." The affections which are most influential in producing obstruction are "peritonitis, strangulated hernia, and mesenteric gland disease." In peritonitis, as is well known, a fibrinous exudation appears upon the surface of

the inflamed membrane, and any two surfaces so affected may become adherent through the medium of this exudation, if they come in contact. These adhesions may exist over a very extensive surface or may involve only a few isolated points. As the inflammation subsides, a good deal of the exudation becomes absorbed, and what remains of it becomes organized into fibrous tissue, thus producing the "adhesions," "bands," "peritoneal false ligaments," etc., so often mentioned as causes of obstruction of the bowels.

The complicated relations and unexpected effects of such adhesions and bands are to be explained by other results of the peritoneal inflammation. During peritonitis the intestines are relatively quiet, and more or less distended from paralysis of their walls. "In consequence of this distension, coils of bowel may be brought together that were normally far apart, or a certain loop may be placed in relation with a comparatively distant point on the parietes. When the inflammation subsides, the parts return as far as possible to their previous positions, peristaltic movements spread through the intestine, coils that were in contact tend to become separated, the bands of adhesive material are persistently dragged upon. It follows that the still soft adhesion yields, becomes elongated and thinned, and ultimately gives way and is absorbed." In this way layers of adhesive material that were broad and membranous may become drawn out into more or less broad bands and cords. The rounded, cord-like form of many of these adhesions is very ingeniously explained by Treves in this way: The bands of adhesive material "subjected to the rolling movements of the intestines over one another and to frequent tension, now in one direction and now in another, tend to become rounded and cord-like, and the more that they are stretched, the more completely is the transformation favored. The intestines, in these movements, have rolled over and under and about the adherent membrane (or omentum, as the case may be), and at last they have molded it almost as a piece of clay may be molded when rubbed between the palms. This change is best brought about when the situation of the adhesion is such as to keep the adhesive material on the stretch." Such cords and bands may be of great length, and may become separated from their attachment at one end, and so form floating cords that may lead to strangulation of a loop of bowel by "knotting," although usually they remain attached and form

arcades, beneath which coils of bowel may become strangulated. In the same way the appendix vermiformis and Fallopian tube have become adherent by their free extremity and have formed similar arcades. Such bands, once formed, often continue to undergo contraction, and "if they exist upon the surface of a fixed part of the bowel, may produce great narrowing of it or produce obstruction by extensive puckering of the intestinal walls." Peritoneal adhesions may bring about occlusion of the bowels in other ways—*e. g.*, by forming a part of the bowel into a rigid loop; they may bend and kink it so violently (as a rubber tube becomes kinked on bending it sharply) that obstruction results; or they may bring certain coils of intestine into such relations as to specially favor the production of a volvulus.

I have mentioned thus fully the effects of peritonitis in producing obstruction by bands and adhesions, because strangulation by such bands, or through slits in the mesentery, or in broad peritoneal adhesions, is, as Treves says, "the type of acute intestinal obstruction, the strangulated hernia of the interior of the abdomen. It obstructs the gut as a hernia obstructs. It involves the small intestine with about the same frequency as does external rupture. The symptoms that attend this variety of intestinal obstruction are in all main points the symptoms of strangulated hernia, and the prognosis of the two affections depends rather upon the situation of the constricting agent than upon any other factor, and, excluding the taxis, both strangulated hernia and the various forms of obstruction from bands and adhesions are amenable to the same general forms of surgical treatment."

Now, as to the forms of peritonitis that may lead to adhesions capable of producing obstruction, "any variety from which a patient recovers may become indirectly a cause of intestinal occlusion. In the great majority of cases, therefore, it will be found to have been a very localized peritonitis. The chief examples are the circumscribed pelvic peritonitis so common in women; that which accompanies typhlitis and perityphlitis; that which depends on injury or on ulceration of the stomach and intestine that has not advanced to perforation." Treves says: "Acute diffused peritonitis is so very seldom recovered from that it can have little concern in the etiology of obstruction."

Another common form of peritonitis producing strangulation is that which often follows upon strangulated hernia. As to this

affection, it is well to remember that there is a fairly common impression that when a strangulated hernia has been reduced and the patient has recovered from the operation, no further evils will result, beyond a possible return of the hernia and with it a risk of a second strangulation. But, not to speak of the complete paralysis of the once strangulated loop, "which may continue the symptoms of obstruction until death ensues, and that, too, without either becoming gangrenous or causing peritonitis," the following may be mentioned as some of the remote perils to the subject of a strangulated hernia recovered from, viz.: "Peritonitis about the reduced loop of bowel may lead to adhesions, causing kinking or bending of the gut, or adhesions to the abdominal wall, or adhesions contracting the lumen of the gut; strictures, as a result of damage to the wall of the bowel; ulceration of the mucous membrane, etc.; and the great lengthening of the mesentery that is usually found in large herniæ favors especially the formation of volvulus of the small intestine." Finally, "mesenteric gland disease may indirectly lead to obstruction in several different ways: (1) The little local peritonitis excited in the serous membrane covering the glands may lead to adhesions or the formation of bands; (2) a diseased gland may lie in the angle of a loop of bowel, the two limbs of the loop being fused together, as it were, by adhesions excited by the diseased gland; (3) in several instances the shrinking of the mesentery after extensive gland disease has been so considerable and has produced so much distortion as to lead to a fatal obstruction of the bowel connected with the diseased area; (4) one case has been reported of fatal strangulation through a hole in the mesentery, probably caused by the breaking down of a mesenteric gland."

I have not before stated that in my case we found the mesentery studded with small granulations, which we considered to be miliary tubercles, and the mesenteric glands were considerably enlarged. The child's mother stated that he had had a swollen belly all winter, frequently complained of stomach-ache, was inclined to diarrhœa, and had become greatly emaciated. The child had the curved tibiæ of rachitis, and gave a history of that disease, the mother being much debilitated during the gestation of this child and during the nursing period. It seems to me fair to assume that the existence of this peritoneal disturbance had some causal connection with the production of the band that

caused the strangulation, as it certainly did cause the adhesion of the loop of the bowel to the enlarged gland which we incised, as mentioned above.

It is unnecessary perhaps to go further into the etiology of acute obstruction of the bowel. There are many other causal factors in the production of the disease, but I have dwelt only upon peritonitis as producing adhesions and bands, because it is the most common cause, and because it is so often met with in practice, and because of its influence in the case I have reported. Further, strangulation by bands, in consequence of peritoneal adhesions, or through apertures, "forms one-fourth of the total number of cases of intestinal obstruction from all causes," and of 160 cases of strangulation from various causes analyzed by Treves, sixty, or nearly forty per cent., were due to "isolated peritoneal adhesions." An additional feature of interest in my case is its *rarity*, since intestinal obstructions from bands, etc., occur most frequently between the ages of twenty and forty years, while they are almost unknown in children. (Treves.)

We have to pass over the symptomatology of this affection very briefly. A previous history of intestinal troubles is not common, and cannot be relied on for purposes of diagnosis. The onset of the attack is sudden, not infrequently following the use of strong aperients. The three cardinal symptoms are pain, vomiting and constipation, and yet the list of morbid conditions that may produce these symptoms is, as Treves says, appalling. Mr. Treves believes, against many authorities, that the site of the pain is of no value as a guide to the position of the obstruction. "With regard to the localization of sensation in the small intestine, it must be remembered that the length of bowel is very considerable; that the coils are perpetually changing their position and altering the mutual relation they bear to one another, and that the part is not very directly supplied with spinal nerves." No matter in what part of the small intestine the obstruction is situated, the pain from it is almost invariably referred to the region of the umbilicus, probably because a little way above the umbilicus is situated the solar plexus, and the pain is referred to that center. A more valuable sign in connection with the pain is its constancy, or lack of it. When the obstruction is complete, the pain is *constant*, not always equally severe, but liable to periodic exacerbations. In cases where there is only partial obstruction, the pain is intermittent, and

there are intervals when the patient is free from suffering, and this difference is of great service in diagnosis. Limited tenderness, if well marked, is of a good deal of diagnostic value, and depends, no doubt, on congestion or inflammation of the coils involved.

Early and constant vomiting is the rule. It is "due to the damage inflicted upon the peritoneal and intestinal nerves by the strangulation, and is a purely reflex act, of precisely the same nature as the vomiting that may follow a wound of the abdomen or a crush of the testicle. The more excitable the reflex centers, the more readily is the vomiting induced. It thus occurs peculiarly early in children and in delicate and unduly sensitive women. Since the nerve supply of the lesser intestine is more liberal and more directly connected with the great abdominal plexuses than is that of the colon, it may be surmised that lesions involving the former segment of the bowel will be more rapidly followed by nausea than will those implicating the large intestine." (Treves.) The vomiting soon becomes *fæcal*, and life is not prolonged, on the average, beyond the third day after the appearance of *fæculent* vomiting.

Constipation, absolute and continuous, is the rule. It depends, in the main, upon the narrowing or occlusion of the lumen of the bowel. "It may depend also upon paralysis of a segment of the intestine, without mechanical obstruction in the intestine itself. It is also to a great extent due to reflex nerve action. Thus, in cases of acute strangulation, the constipation is often absolute from the very commencement, although the obstruction may be in the small intestine and much *fæcal* matter be lodged between the point of occlusion and the anus."

The temperature is usually subnormal, being that of collapse, and it may even continue to sink when peritonitis has set in. When peritonitis comes on, provided it is not excited by perforation, it is commonly indicated by a rise of temperature above the normal, in acute strangulation, although this symptom *may* not be present. Meteorism is comparatively slight in this form of obstruction, and generally appears about the third day. We hardly ever see coils of intestine through the parietes, although the reverse of this condition is observed in chronic obstructions. Unless relieved, these cases always die.

When we come to the diagnosis, our difficulties increase instead of lessening. It is strictly true, as Treves states, that "it is doubt-

ful if any ailment of equally common nature has been the subject of so many errors in diagnosis. In spite of the comparative frequency of the condition, the simple *recognition* of its existence, quite apart from any attempt at differentiating its various aspects, is often a matter of considerable difficulty. There are not many maladies that present so slight a relationship between pathological data and clinical data as does the general subject of intestinal obstruction, while there are few in which it is more important that that relationship should be most intimate." Many of the errors in diagnosis are due to incomplete investigation. The previous history should be carefully studied, as well as the exact mode of onset and the time and mode of appearance of the principal symptoms. "It is just here that the record of many published cases is so imperfect. No information is furnished as to the nature of the pain, its situation, the duration of the attacks, the length of the intervals between the attacks, the condition of the patient during these intervals. We should make repeated examinations of the abdomen, because a swelling that is not apparent at one time may become evident a few hours later, and it is absurd to suppose that a single inspection is likely to give all the information that might be derived from examining the belly." In particular we should examine in every case all the hernial orifices and make a complete examination of the rectum.

But however carefully and thoroughly the physical examination of the case may be made, it will happen in many instances that no conclusion can be arrived at. Is there nothing left, no aid that can be called in? There is one supreme resource remaining—laparotomy; and my chief object in addressing you is to strenuously urge every physician within the sound of my voice to do his best in educating the community up to the point of believing in the necessity, as they may in the safety, of this operation, when performed early. I do not propose to speak of it as a method of treatment, for we will all admit that, in the majority of our cases, it is the only treatment possible. I purposely omit all reference to other features and modes of treatment—the proper feeding of the patient, by rectal injections; the avoidance of aperients; the use of enemata or the insufflation of gas or air; massage; and, above all, opium, which, valuable as it is, may yet lull us into a false sense of security and only mask symptoms until collapse or gangrene of the imprisoned

bowel makes any attempt at relief utterly futile. It is taken for granted that all these means will be promptly and faithfully tried, but only for a brief period—two or three days at the most.

The subject of intestinal obstruction and of abdominal surgery has been so much written about of late that it has no doubt become wearisome to those who are not interested in special surgery, but there can be no doubt of its vast importance, and perhaps no question connected with it is more important than that of laparotomy for purposes of diagnosis. The cases of intestinal obstruction proceed so steadily and rapidly to a fatal ending that we seem to be justified in resorting to *any* means that may establish the nature of the difficulty and lead to its proper relief, and it is of the highest importance that this relief be furnished early, for fatal collapse sets in most rapidly after final strangulation has taken place, cases having died in twelve hours from the onset of the attack. The most vital interest attaches, therefore, to the question of diagnosis, for it is only in those cases where an early diagnosis is made and operative relief promptly furnished that any hope of recovery exists.

Mr. Treves's statistics show the mortality from laparotomy for intestinal obstruction, exclusive of intussusception, to be sixty-three per cent.; for intussusception, seventy-three per cent. Schramm, a German authority, quoted by Treves, using a larger number of cases, gives a mortality for laparotomy for all kinds of intestinal obstruction of sixty-four per cent. But these statistics are based on recorded cases, including, no doubt, most of the successful ones, and if all cases were reported the percentage of deaths would be very much higher. This high mortality need not surprise us. In the majority of cases the operation was performed in the pre-antiseptic period and previous to the great advances that have been made of late years in this department. Schramm has shown that the cases of laparotomy reported prior to 1873 show a mortality of seventy-three per cent., while those reported since that date give fifty-eight per cent. of deaths, a saving of one additional life in three. Many of the recorded cases were improper ones for operation. Some patients were almost moribund at the time operation. In some there was general acute peritonitis; in others fæcal extravasation had occurred; in others the gut had become gangrenous, and ruptured when it was handled. Dr. Schramm gives a table to show the influence that the time of performing the operation has upon the result, from which

it appears that a delay even of twenty four hours is a most serious matter.

An examination of the records shows that in proper cases and when the operation is undertaken early enough, laparotomy is by no means so very fatal a procedure. The one great fact that affects the issue of the operation is not so much the age of the patient, nor the seat of the obstruction, nor the period in the disease when the operation was done, but the state of the gut; and since pathology can give no precise instruction on this point, there is no reason why we should not resort to laparotomy, bringing to its performance all the care and skill that the teachings of modern surgery can secure. The great Dr. Gross once said: "I never know exactly what I am to find until I get into the abdominal cavity;" and the frankness of his confession should encourage those of us who have so much less experience to admit our helplessness in the face of this most serious disorder, and impel us to resort courageously to the one aid that can, in many cases, clear up the mystery.

I would not encourage hasty and indiscriminate resort to laparotomy, either for diagnostic or therapeutic purposes; but when it is remembered that in the vast majority of cases it is the only safety of the patient, it will surely be admitted that it ought to be resorted to very early. It should be, as our great authority says, "the first resource and not the last." When undertaken as an aid to diagnosis, every preparation should have been made for performing the operation in a proper manner as regards antiseptic precautions and hygienic surroundings and for completing any procedure it may show to be necessary for treatment, such as enterotomy or resection of the gut. As Dr. Bryant remarks, "Unless the operation is surrounded with proper safeguards there is danger that discredit will be thrown upon it, and that it will be relegated to the obscure position which it occupied only a few years ago." But with a fuller knowledge of the technique of the operation, with a more certain acquaintance with the symptomatology of obstruction, and with a greater care in the selection of cases, there is no reason why the operation of laparotomy should not have a mortality but little, if any, higher than that for the relief of strangulated hernia.

INTRODUCTORY LECTURE.¹

BY HENRY HUN, M.D., ALBANY,

*Professor of Diseases of the Nervous System and of Psychological Medicine,
Albany Medical College.*

Gentlemen—It is my pleasant duty to deliver the introductory lecture at the opening of this, the fifty-seventh, session of the college, to give you a hearty welcome in this amphitheatre, which for nearly fifty years has been the scene of medical instruction, and to wish you success in the course of study which you are commencing. Those of you who have attended previous courses of lectures here cannot fail to notice the great improvements which have been made in the amphitheatre; comfortable chairs replace the old benches, steam heat has been introduced, and cold, uncomfortable lecture hours are, I hope, things of the past. Certainly the faculty have taken much pains that students who come to listen to the lectures shall not have their attention diverted by hard benches, cramped positions, and freezing hands and feet. This improvement in the building, which strikes your attention at the very outset, is, I trust, accompanied by a more important improvement in the course of instruction; and I believe that you will find that the lectures are enriched by all the progress that the medical sciences have made during the past year. There has never been a time when medical research and discovery were more active than they now are, and it is in constantly improving its course of instruction, and in keeping it abreast of the advance in medical knowledge, that the true life of a medical college consists.

But, in spite of the changes in its appearance, this is the same old amphitheatre in which, for nearly fifty years, professors and students have worked together in the pursuit of medical knowledge; and it has all the interest attached to it which a room must have which has been the scene of earnest activity of one generation of men after another, ever changing, yet all working toward the same end. And the lectures, in spite of the changes which have been made in them from year to year, now, as always, contain the great truths of medicine, as far as they have

¹ Delivered at the opening of the the fifty-seventh session of the Albany Medical College, Tuesday, September 20, 1887.

been discovered. To you who have come here to learn that medicine which is the result of many centuries of investigation, there surely can be no question of greater interest than this: What is the science and art of medicine, and how can it best be studied? A complete answer cannot be given in the brief limit of an introductory lecture, but there are certain aspects of the question which seem to me to be of especial interest to a student at the beginning of his medical study.

Medicine, the healing art, is, in some respects, a universal art. A man stricken down by accident or sickness instinctively turns to his fellow men for aid, and there are few men, and still fewer women, who have not some remedy to propose; and the patient, or the suffering man—for that is the meaning of the word patient—must be something more than human if he is not anxious to try each remedy suggested. There is something strange and touching in this confidence which the sick have in their fellow men, and in this belief that their fellow men, no matter what their education or training may be, can help them.

This belief that men are born physicians has always existed, and exists, even in the most civilized and enlightened countries, to-day. It is true, the sick are no longer carried to the market place, and each passer by is no longer compelled to question them in regard to their symptoms and prescribe for them, if he has ever observed or experienced a similar disease, as Herodotus tells us was the custom among the Babylonians and Chaldeans in his time, yet, at the present time, doctors well know how eagerly the sick take both advice and medicine at the suggestion of any chance acquaintance, and how readily many persons offer advice to their sick friends with a confidence born only of ignorance. The sale of patent medicine is enormous, and scattered throughout the city are many old women who make some curious concoction, and who are regarded as possessing great medical skill and wisdom, not so much the result of education and training as the result of natural powers. The world, however, has not been contented with these natural doctors; but from the earliest times there has existed a separate class of men whose special function it was to care for the sick. These were at first the priests, from which later the doctors branched off as a separate class.

In the early days of history, when people regarded sickness—and every other sorrow and joy that came to them—as being

sent by spirits and gods, it was natural that they should turn in their sickness to their priests, in the hope that by prayers, incantations and religious ceremonies, or by following the direction of an oracle, they might be freed from their affliction. In the Grecian temples were suspended tablets bearing the names of those cured, and the oracular direction which had been followed in bringing about the cure; and the traveler in Italy to-day can see in many churches quantities of tin arms, legs, etc., which are suspended at certain altars and shrines in witness of a lameness cured, an ulcer healed, and other cures effected in answer to prayers at that shrine.

Unfortunately, partly as the result of these religious ceremonies, partly as the result of the belief in the natural healing powers of certain persons and things, an idea of mysticism became attached to medicine at its very origin, which still clings to it, and which shows itself in many delusions of the present day, as well as in those of the past. During the past year, the delusions called the mind and faith cures took root in this city, and rapidly grew to be a large and profitable business, and then as rapidly disappeared. There still flourishes among us another delusion, covered with the pretense of a scientific garb, and founded on the claim that according to some occult principle in dynamics a particle of medicine becomes more and more powerful the smaller it becomes, and that the majority of diseases are internal manifestations of the itch, and bearing for its motto those mystic but senseless words, "Like cures like," which, even if they contained a particle of truth, have reference only to symptoms, and leave the essence of disease unstudied. But not to speak of these more elaborate forms of delusions, there is in the minds of most people a certain mysterious element in medicine itself. The majority of people, no matter how trivial their complaint may be, nor howsoever sure they may be that a short time is all that is needed to restore them to health, will still insist upon taking medicine, and will be much happier when they do so, relying, perhaps half unconsciously to themselves, more on some mysterious attribute with which they endow medicine because it is medicine, than on any material action which the medicine may have upon the human system.

But the cloak of mysticism has never been able to entirely envelop scientific medicine. There is another idea of medicine which has existed from the earliest times, and which has become

more and more prevalent, until now every educated physician believes it; and that is, that diseases are self-limited, and that the human system possesses within itself a power to cure disease. That is a truth, I think, which lies at the foundation of all medicine. When an injurious or noxious thing acts upon a dead body and a living one, the former remains as passive as a block of wood, while the latter reacts with a whole chain of phenomena, which we call disease, but which is really the way in which the body recovers itself from the injury inflicted upon it and becomes restored to health. The dead body does not react, because it is dead and has no recuperative power; the living body reacts, and thereby continues to live and overcomes the injury inflicted upon it. A machine or instrument may get out of order, but it cannot be diseased. Nothing but a living being which has recuperative power can suffer from disease; for the essence of disease is a struggle of a living being against some noxious influence. This idea of disease reveals the great object of medicine, which is not to combat the symptoms of disease, but to aid the body, if possible, in the struggle in which it is engaged, and from which it would, if left to itself, in many cases, issue victorious.

Starting with this idea of the function and aim of medicine, it is not difficult to see how we should study it. Evidently we must first acquaint ourselves thoroughly with the structure of the human body—we must learn of what substances it is made and how they are put together. The composition of the body we learn in physiological chemistry, the structure of it we learn in anatomy; and accordingly these two studies are the ones which must first be mastered in any proper course of medical study. But it is not enough to know the dead body as we learn it in the laboratory and dissecting room—we must know it in its life and activity. We must thoroughly understand all the forms of vital activity and life which the body manifests—not only those coarse exhibitions of activity and power that every one can see, but also those minute exhibitions of vital activity which take place in the interior of the body, many of which can be studied only with the aid of a microscope. These actions of the living body we learn in physiology. Through anatomy, physiology and physiological chemistry we become acquainted with the healthy body; and although this knowledge is in a sense preliminary to the study of medicine, yet it is very essen-

tial, for our knowledge of the structure and action of the healthy body is the foundation on which all our knowledge of disease rests. A mechanic could not repair the simplest broken machine if he did not know its construction and action.

Having mastered these preliminary medical sciences, we commence the study of the things and influences which are harmful to the body and which are causes of disease, and we learn what changes are produced in the normal structure of the body by these noxious agents. These things we learn in general pathology and in special pathological anatomy; and just as anatomy is the foundation of all our knowledge of the normal body, so pathological anatomy is the foundation of all our knowledge of the diseased body. But disease not only changes the structure of the body, it also produces a change in the vital actions which the body exhibits; and just as from physiology we learn about the actions which take place in the healthy body, so there is a pathological physiology, or pathology, from which we learn how these normal actions become altered by disease. This pathological physiology we call the study of the symptoms of disease, or the natural history of disease, and it is so very extensive that it must be divided up into numerous branches, which are called surgery, or external pathology, medicine (in its narrower sense), or internal pathology, and the numerous special branches, such as diseases of the eye, ear, throat, etc., into which medicine and surgery are now subdivided. In studying the natural history of disease, we study first the natural course of the disease, uninfluenced by treatment, and then study how this course is modified by drugs and other therapeutic measures. But it requires some special training in order to properly study the natural history of disease. It is necessary to train one's self in the physical examination of patients; for it is by means of a physical examination that we are able to recognize changes in the structure and action of the body, so that an important part of medical study is the learning how to make an exhaustive physical examination. Finally, when we have learned the normal structure and action of the body, and have learned how, under certain noxious influences, this normal structure and action become altered, and have learned to what extent these changes in structure and action are conservative and tend to the recovery of the body from the injury inflicted upon it, we then commence the study (to which all our previous work has been preliminary) of what we can do

to aid the body in its struggle towards recovery, and of what drugs have been found to favorably modify the course of the different diseases. This we learn in therapeutics and materia medica.

Such is a general outline of a course of medical study—first, anatomy, physiology and physiological chemistry; then general pathology and pathological anatomy; then the natural history of disease and the examination of patients; and, finally, therapeutics. It is true that these are all subdivisions of the study of medicine, and that they are all so intimately connected that one cannot be absolutely separated from the other. It is scarcely possible, and certainly not practicable, to learn any one of these studies and not at the same time learn more or less of the other branches; and this is especially true of the natural history of disease, in studying which we study the disease in its entirety, and learn not only its course, but also its etiology and treatment. Still, to a great extent, these branches are independent of each other, and are so studied.

In some medical colleges there is a rigidly prescribed course of study, in which the different branches are arranged somewhat in the order in which they are given above; but in this college, as well as in most of the colleges in this and in foreign countries, there is no prescribed course of study, and the student can follow out, in great measure, any plan that seems best to him.

During your first year's work, it seems to me that you would do wisely in devoting yourselves especially to the primary branches, anatomy, physiology, chemistry and microscopy. During the second year, you can review these primary studies and pay more attention to general surgery and medicine. At the end of the second year you can pass your examination in the primaries, so that during the third year you can devote yourself entirely to general medicine and surgery and to the special branches. It is so important, however, for you to see cases of disease that you would do wisely in attending closely to the medical and surgical clinics from the beginning to the end of your course. Whatever method of study you pursue, you have a hard task before you in learning medicine, and I earnestly hope that you will have sufficient industry and perseverance to carry you through the course, and that at the end of it you will meet with success.

CORRESPONDENCE.

THE NINTH INTERNATIONAL MEDICAL CONGRESS, WASHINGTON,
D. C., SEPTEMBER 5-10.

Editor Albany Medical Annals:

I propose to give the *ANNALS* something of an account of what one person saw and heard in Washington at the Congress.

Owing to delays, Washington was not reached till Tuesday afternoon.

In the evening a little time was spent at the Riggs House, which was overflowing with old, middle-aged and young men decorated with silver (?) medals, and then the White House was made for. It was only eight o'clock, but it was half-past nine before the President and his fair wife were shaken hands with. The wait in the column of twos was rather tedious, but nearly all took it as the best way the affair could be handled. Near by were a prominent London professor and his wife. She was outspoken in her disgust that an "English lady had to stand in the street." It was too bad, and perhaps the foreign guests might have been let in at a separate entrance. At any rate, when the White House was reached, it was found to be only comfortably filled, while at the reception given to the American Medical Association in 1884 by the late President Arthur, the jam was almost frightful, because of no "column of twos." One American remarked as we were waiting that he attended a reception in '62 in London, where the crowd was so great that he trod on the toes of the Earl of Shaftsbury; so they do not always handle these receptions perfectly across the water.

Wednesday. The gynecological section opened promptly at eleven, and it may well be noted here that the immense amount of work done by it during the Congress was due in great measure to its president, Dr. Marcy, of Boston, who was not only a superior chairman, but also a thorough organizer, using every minute to advantage.

Tuesday afternoon a number of papers had been read on the electrolysis of tumors, uterine and mammary, by Apostoli, Martin, of Chicago, and Smith, of Canada, on the uterine part of the subject, Dr. Garrett, of Boston, giving the results of operations on 186 tumors of the breast, 157 of which had disappeared, etc., etc.

This Wednesday morning Dr. E. Cutter, of New York, was introduced as the pioneer, and he proceeded to read his paper on "Electrolysis of Uterine Fibroids," in which he said that the expectation had been in 1871 to arrest the tumors, while the realization had been that many had been cured, others arrested, etc., and that the operation was now known and had become quite well worked up, and uterine fibroids were no longer *opprobria medicorum*. In his answers to critics, he attacked Apostoli's paper, lately published in the *Medical Record*, as one that not only ignored all of his (Apostoli's) predecessors, but also as one that claimed that they (his predecessors) had not been in earnest in their work and did not have a definite object. Dr. Cutter claimed that Apostoli, in using universal terms, had laid himself open to just criticism, as electricity was something

that little was known about. As to Apostoli's criticism that his predecessors had not used measurement, he said that Dr. Garrett had spent one thousand dollars to get up a voltameter which in 1877 was not large enough to measure the current from the Cutter battery while traversing a fibroid. He added that measuring a work was not doing it, and that many cases had been cured without measurement by a galvanometer, though there were always tests used to show that there was current. The discussion was very sharp and spirited. Dr. F. H. Martin wagered one thousand dollars that Dr. Cutter could not get any current through two inches of tissue, proving (?) this by calculations on a blackboard. Dr. Garrett testified about his experience with a living rabbit, saying that whenever the current from the Cutter battery was passed through the rabbit he would scream with pain, and claimed that Dr. Martin's calculations were worthless. Much more was said, and Dr. Cutter, in closing the discussion, called Dr. Apostoli to the front and asked him if he had any complete cures. Dr. A. replied that he cured his cases symptomatically, the women not feeling that there was any tumor there. Dr. Cutter then said that he distinguished between Apostoli and his sayings, and wished all Godspeed in this work, and that it was not a question of methods nor of men, but of "curing the women." This is given somewhat in full, as it shows a case where the feeling of the majority of the audience was in favor of foreign methods, despite the fact that the best results in the world have been achieved in America in this line of gynecological work.

I then went to the laryngological section, and heard much about the galvano-cautery, batteries, etc.

In the afternoon, at the section of General Medicine, Dr. Ouchterlony read on "The Natural History of Disease," a paper which elicited much discussion.

Dr. Crothers (an Albany graduate) read on "The Disease of Inebriety and its Treatment," a very scientific paper. Discussion was long and interesting. Much was said as to the cure of drunkards by religious conversion, some citing the work done at the Christian Home in New York, where 65 per cent. are claimed to be cured, others calling attention to the late Jerry McAuley's efforts, and others thinking that the conversion was only a type of the disease. All were in earnest and seemed to realize the importance of the subject. Other papers were read which I could not stay to hear, and one, I believe, by Pavy, on "Diabetes," though it may have been read the next day. (The *Medical Record* has given quite a full account of this Congress, though it is by no means complete or correct.)

Thursday—General Medicine. First paper was by Dr. Cutter, of New York, on the "Morphology of Rheumatic Blood," illustrated by lantern exhibition. This paper was followed by an address of Senator Professor Semmola, of Italy, on the "Pathogenesis of Albuminuria." Discussed by Drs. Nunn and Cutter, Sir James Grant saying that these two papers showed positive advance in medicine. Other papers were read which I could not stay to hear. In the afternoon visited the section of Diseases of Children, and listened to a paper by Professor Leeds, in which Fairchild's Peptogenic Powder was highly extolled and all other infants' foods condemned. This may all be true, but good use has been made of some

foods, to wit: Mellin's, for one. The professor was asked the amount of starch in Imperial Granum, he replying that it was 80 per cent. His questioner then said that this Imperial Granum, which is said to be an "extract," which should be amorphous, was instead found to be under the microscope composed of beautiful starch grains which were decidedly morphological. Attention was called to the iodine test for starch as one of great simplicity, cheapness, and always to be relied on. After the session adjourned, it was said that Fairchild's Powder, though a really valuable preparation, did not always give good results, on account of the poor milk obtained in the large cities. An abstract of a paper on the "Pneumonia of Infants," by Professor D'Espine, of Switzerland, was read by a gentleman whose name I am not acquainted with. The president of the section also read a paper on "Scarlatinal Nephritis," from a clinical and pathological standpoint, by Henry Ashby, M.D., M.R.C.P., of Manchester, Eng., and Dr. Frank Grauer, read on the anatomical characteristics of this disease, also showing a number of specimens of the diseased kidneys under the microscope.

At the gynecological section I found a brisk discussion on the "Operative Treatment of Uterine Myoma." Dr. Hewson gave the results of his use of clay, 90 per cent. of cures resulting by this method. I hope to be able to see his work in Philadelphia, for if he can substantiate what he claims, then his procedures are the best in the world.

Friday. At General Surgery, at half-past ten, Dr. M. J. Roberts, of New York, was demonstrating his "electro-motors for operations on bone." The apparatus is large and costly, and may be very effective, but would not do for general practice, and, as one critic said, might scare the patients. Dr. R. claimed many things as his own invention, while others thought that they had been used before. In a photograph passed around of an operation, there are four or five assistants to be seen, yet it is claimed for this instrument that one man can do all the work and therefore is independent. As for the control of the cutting instruments, Dr. Roberts showed shields to put under the bone when operating on the skull; that would seem to indicate that the saw when revolving might go farther than the holder would like unless there was something for it to come against; in that case, would not the saw be injured? I admire Dr. Roberts' perseverance, but is he working in the right line, to wit: Simplicity?

At the "Gynecological," at eleven, after some discussion on "Sutures in Abdominal Section," the subject of "Cancer" was brought forward for discussion. Dr. August Martin, of Berlin, spoke for over half an hour, describing in detail his procedures in vaginal hysterectomy. He was followed by Dr. D Arnay, of Hungary, and Dr. Dudley, of New York, both speaking in favor of this operation. Dr. Nunn, of Savannah, Ga., said that he had never had a case of uterine cancer occur in his practice of over thirty years; after confinement he had taken pains to see that all wounds were healed. He had had cases of cancer sent to him. Graily Hewitt, of London, thanked Dr. Martin for his work. Dr. Cutter, of New York, gave an abstract of his paper on "Diet in Cancer," recently published in the *ALBANY MEDICAL ANNALS*, and said he would not have the courage to speak as he did if his wife was not a living argument. He believed that the way to attack the cases, and especially those which Dr.

Martin said could not be operated on, was through the nutrition. Dr. A. Reeves Jackson, in closing the discussion, said that it was impossible to tell whether a cancer was located only in the uterus. As to the cases reported by Dr. Martin, only four were now living. He had calculated that nearly three hundred years of life had been lost by those operated on who had died, taking a certain number of cases. And as to statistics from operative procedures, Baker, of Boston, was far ahead in the "superior" operation. When this statement was made, the room was hushed; there was no applause, as one might think ought to follow when a man amongst his countrymen makes a statement that another countryman is having better results from his work than those abroad.

An Englishman told me after adjournment of the Congress that he had been amazed at what was reported to be done in medicine and surgery in this country.

The section then adjourned to allow the "Surgical" to use the room for lantern purposes. A number of plates of the prostate in health and disease were thrown on the screen. It might be well said here that the demonstration would have been better if the sheet, instead of hanging from the ceiling had been placed against a vertical plane, as then focusing would have been accomplished all over the diagrams. Some of Dr. Martin's plates were shown of the uterus, and it was nearly two o'clock when the section adjourned.

In the afternoon, at the "Laryngological," a long paper on the "Anatomy and Physiology of the Vocal Chords" was read by Dr. Deservine, of Havana, Cuba. This paper will doubtless prove scientifically interesting when perused from the transactions, but the intense atmosphere of work of the week was getting in its work, and it was almost impossible to pay any attention to it. Dr. O'Dwyer followed on "Intubation for Laryngeal and Tracheal Stenosis," with demonstrations on specimens. Lennox Browne thanked Dr. O'Dwyer for his work. It seems that some very good results have been effected, though there were cases which could not be treated in that way. The discussion drifted off into the field of acute affections, and the section then adjourned.

I had almost forgotten the Buffet reception on Thursday night, at the Pension Building. It was a success. The "unwashed" were absent. The building was beautifully decorated, and was large enough to contain the six thousand or more people present comfortably. If dress suits are a criterion of the good standing of medical men, then a great many of the country doctors there were unjustly styled by a Philadelphia paper as second-rate men. (When the work of the Congress is published, then all can judge as to its scientific value. The quarrels and troubles preceding it are to be deplored, and it is hoped that they will not occur again when the time comes for the next congress to meet in America. Only one thing will I note; the closure of one of the best medical museums in the world, namely, the Army and Navy Medical Museum, was regretted. As to the hospitalities shown, certainly they were abundant and hearty.) But to come back to the Buffet reception. At portions of the room could be seen Sayre, Sir James Grant, President Davis, Dr. Atkinson and others holding informal receptions. Under the care of Dr. A. F. A. King was Professor Simpson.

Chatting with some Cuban friends, was Dr. Friere, of Brazil. The reception given him by the congress must have been extremely gratifying. When he went into the study of yellow fever, he was compelled to go down into the wretchedness, filth and dangers of the worst part of Rio. He was ousted from a city official position by enemies. Yet he kept on, and the result has been wonderful. I have conversed with an American born, who is now a resident of Brazil, whom Friere inoculated against yellow fever. I have studied Friere's books on method of research, treatment of the disease and the statistics of preventive inoculations, and have examined what he believes to be the yellow fever spore with a one-fiftieth inch objective, and so it was a great pleasure to meet this man. He is young, and doubtless has many years of usefulness before him.

The superb displays of druggists, chemists, and instrument makers need no praise; the entire basement of Albaugh's Opera House was devoted to them.

Saturday morning I had the pleasure of attending the general section, though it was the last session. The opera house was comfortably filled with an enthusiastic audience. President Davis called the Congress to order, and after some routine business, Graily Hewitt, in behalf of the foreign members, offered a resolution of thanks to President Cleveland, the executive committee, particularly Drs. H. M. Smith, J. B. Hamilton, Garnett, Toner and Arnold, and to the citizens of Washington, for all that had been done to make the Congress a success scientifically and socially. Dr. Martin, in German, said he came here with doubts, which had been all dispelled. Landolt, in French, thanked the President for his courtesy to the Congress, and Edmund Owen, of London, extolled Mrs. Cleveland, and wished that the President and his wife may long preside over this country. The applause was very hearty. Secretary General Hamilton replied, and President Davis, in a grand address, thanked all for what they had done to make the Congress a success, expressed the wish that he may be privileged to attend the next one in Berlin in 1890, and declared the Ninth International Medical Congress adjourned.

SARCOMA.

ABSTRACTA.

SEWER-GAS POISONING.—The toxic element probably is one of the following: (1) Pathogenic bacteria, which have already been isolated and studied, and may, therefore, be said to be "known." (2) Pathogenic bacteria which have not yet been isolated and studied, and are, therefore, "unknown." (3) Poisonous gases, such as hydrogen sulphide.

The first two classes are by far the most important as a cause of disease, and in them the sewer-gas merely conveys the specific germs, which have got into it more or less accidentally, and which are not necessarily present in sewer-gas.

In twenty-nine cases reported there was an escape of a large amount of sewer-gas into the air which the patient breathed,

and at the time each case was observed it seemed extremely probable that the sewer-gas was the cause of the disease. I have notes of a number of other cases of this class, but as they are not in all respects convincing, I have not reported them; and I would only say that it seems to me that phthisis and also diabetes mellitus may sometimes have their origin in sewer-gas poisoning. (In addition to the numerous reported cases of disease due to sewer-gas poisoning mentioned in the notes to this paper, there are some other forms of disease which it is claimed are due to sewer-gas poisoning. Thus, Playfair (*Lancet*, February, 1887, p. 251), Cosgrave (*Trans. Acad. Med. Ireland*, 1885, 3, p. 365), Brown (*Brit. Med. Journ.*, March, 1879, p. 346), and Trask (*N. Y. Med. Record*, October 16, 1875), think that puerperal fever may be due to this cause; while Brown (*loc. cit.*), Owen (*Lancet*, 1878, 2, p. 172), Cheadle (*Lancet*, August 17, 1878), and Noel (*Am. Pub. Health Ass. Rep.*, 1876, p. 362), think that abscesses and enlarged and suppurating glands may be due to sewer-gas poisoning; and Cassells (*Edinburgh Med. Journ.*, 1878, 18, p. 910) thinks that acute aural catarrh may be due to the same cause.)—[*Author's Footnote.*]

The following conditions may result from sewer-gas poisoning:

(1) Vomiting and purging, either separately or combined. (2) A form of nephritis. (3) General debility, in some cases of which the heart is especially involved. (4) Fever, which is frequently accompanied by chills. (5) Sore throat, which is frequently of a diphtheritic character. (6) Neuralgia. (7) Perhaps, also, myelitis of the anterior horns.

These conditions may occur separately, but are frequently combined, and it is especially common for the fever to be associated with the other forms of sewer-gas poisoning.

One group of symptoms which is almost always prominent is: loss of appetite, drowsiness, extreme prostration, and a dull, unpleasant feeling in the head; and whenever this group of symptoms occurs, not as the result of an attack of acute disease, but as a chronic condition, we are justified in suspecting that the patient is exposed to sewer-gas infection.

If we summarize the cases of sewer-gas poisoning which are scattered through medical literature, and which have been mentioned in the notes to this paper, we find that more or less satisfactory evidence has been adduced that the following diseases may result from sewer-gas poisoning:

(8) Zymotic diseases, such as typhoid fever, pneumonia, diphtheria, cholera, dysentery, cerebro-spinal meningitis, erysipelas, and scarlet fever (in these cases undoubtedly the sewer-gas merely acts as a vehicle for the specific germ). (9) A condition of asphyxia, which, in its severe form, is characterized by coma, convulsions and collapse. (10) Puerperal fever. (11) Abscesses. (12) Lymphadenitis. (13) Acute aural catarrh(?).—*Henry Hun, M.D. Albany, in Medical News, Aug. 20; The Epitome.*

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

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VOL. VIII.

OCTOBER, 1887.

NO. 10.

DR. ALONZO CLARK.

Among the readers of this journal there are many who have read with sincere regret the death notice of Dr. Alonzo Clark, of New York. The number is not small in this county alone of those who regard him as a father in medicine. The old "Twenty-third Street School" has some half dozen representatives here, and several classes of that period, as well as of later years, are residents of this vicinity. We all remember the easily mannered, yet sufficiently dignified, figure, not too carefully attired, with the full, composed countenance and the large, capacious head, already covered with white, that came quietly into the lecture-room of the old building at the four o'clock hour. We have yet to hear any of his pupils of that time, when his faculties were ripe, yet still active, who failed to give him the highest place in their estimate of all the lecturers in medicine that they had been favored with listening to. There was the steady flow of continuous thought, the aptness of expression, the array of personal experience of a master mind, the occasional spice of dry humor that gave charm to the lectures and impressed the value of the hour. No one ever grew weary, although the hour was the last one of a hard day of study. Doubtless he impressed more of his instruction and individuality of views permanently upon the student's mind than any one else of the good faculty with which he was associated fifteen or twenty years ago. For so slight a contributor to medical literature the amount of his contribution to medical knowledge and the elevated place he holds in the professional estimate is remarkable. It largely comes from the sincere regard of the generations which during more than forty years sat under his teaching.

—THE COLLEGE OF PHYSICIANS AND SURGEONS is to be no longer the "Twenty-third Street School." The unpretentious structure, which for so many years has been the busy home of almost the oldest medical school in America and has called to the mind of the passing non-resident graduate the memory of associates, incidents and aspirations of a greater or less number of years ago when he was the grist in process of grinding, will probably soon, as has its long-time associate, the old New York Hospital down town on Broadway, "pass out of the light of common day into the quiet world of years gone by." The college opens its session this fall in its new quarters on Fifty-ninth street. While regretting the destruction of the tangible and visible reminders of the past, its graduates cannot but rejoice in the prosperity which has placed at its control the magnificent building, together with the Sloane Maternity Hospital and the Vanderbilt Clinic, given by the late William H. Vanderbilt and his family. May the memory of the voices of the great men which echo in the old lecture-rooms be an inspiration to those who represent it in the new.

—DR. J. A. S. GRANT-BEY, M.D., senior surgeon to Railway Administration of Cairo, Egypt, arrived in Albany on Thursday, September 29, as the guest of Dr. Albert Vander Veer. Their acquaintance began in Copenhagen, at the International Medical Congress, in 1884, and the friendship there formed has brought about this visit to Albany. Dr. Grant-Bey lectured in the Albany Medical College on Friday morning on "Cholera, its Habitat, Cause, Prevention and Treatment." The news of his arrival had rapidly spread, and the college amphitheatre was well filled with physicians and students. On Saturday morning he lectured again in the College on "The Medical Aspect of Ancient Egyptian History." After the lecture he presented a choice display of ancient bric-a-brac, which he has been collecting in Egypt for the past twenty years. On Monday evening the faculty of the Albany Medical College met Dr. Grant-Bey at Dr. Vander Veer's residence, 145 State street, by special invitation. In the course of his conversations, Dr. Grant-Bey remarked that the Jews are rapidly taking possession of Jerusalem, and bid fair to soon verify Bible prophecy by their return *en masse* to Palestine. On Tuesday evening he addressed the Albany Institute on the "Archæology of Egypt," and again

exhibited his remarkable collection of antiques, and showed himself an able hieroglyphist. The Coptic language, from which many hieroglyphic symbols are known to be derived, is still spoken in Egypt, but not in its original purity. Dr. Grant-Bey does not agree with the view that Rameses II. (Pharaoh) was the husband of his own daughter who protected the infant Moses, as this Rameses himself promulgated the law forbidding a father to marry his daughter.

On Wednesday Dr. Grant-Bey went from Albany to Springfield, Mass., to attend the meeting of the American Board of Commissioners for Foreign Missions, and left with Albanians the pleasant memory of a visit all too short, and remarkable for the amount of information and pleasure afforded in a brief time to many interested auditors.

Dr. Grant-Bey has been well known to our readers by his frequent contributions to our pages. We hope in our next number to print in full his lecture on "The Medical Aspect of Egyptian History."

—THE STENOCARPINE SENSATION; AN ATTEMPT TO IMPOSE UPON THE MEDICAL PROFESSION.—Our readers are doubtless familiar with the reports of Drs. J. H. Claiborne, Hermann Knapp and Edward Jackson, concerning the so-called new local anæsthetic, Gleditschine, or Stenocarpine, which were published in the *New York Medical Record*, July 30th, August 13th and October 1st; and *Philadelphia Medical News*, September 3d; in which Gleditschine was claimed to possess remarkable anæsthetic and mydriatic properties.

It will, therefore, be of interest to them to learn that Messrs. Parke, Davis & Co. announce that an investigation at their laboratory, of a solution purporting to be a 2 per cent. solution of Gleditschine, or Stenocarpine, which was supplied by Messrs. Lehn & Fink, of New York, has developed the fact that this solution, with which the experiments thus far recorded have been made, contains 6 per cent. of Cocaine and a sulphate of a salt which further experiment is likely to prove to be Atropia.

F. A. Thompson, Ph.C., also reports, after careful experiment with the leaves of *Gleditschia triacanthos*, from which Gleditschine, or Stenocarpine is claimed to have been derived, that they contain only an infinitesimal percentage of an amorphous alkaloid devoid of anæsthetic or mydriatic properties.

In the light of these facts, it seems probable that the Stenocarpine sensation should be classed with the Hopeine fraud of malodorous memory, and that the physicians who have already published reports regarding Gleditschine, or Stenocarpine have been the victims of a clever hoax.

BOOK NOTICES.

REFERENCE HAND-BOOK OF THE MEDICAL SCIENCES. Volume V.

This work continues to make its regular appearance, and each forthcoming volume adds its part to what is to be a unique and most satisfactory compendium of the science of and pertaining to medicine. The five large volumes now issued contain a mass of material, in encyclopædic form, much of which it would be difficult to find elsewhere. Consisting largely of short topics, there are not wanting articles of considerable length. The principal subjects in the volume just issued are Nose, Nutrition, Neck, Optics, Ovary, Photo-Micrography, Plastic Surgery, and Poisons. Dr. Buck is to be congratulated on the results of his editorial labors.

STATISTIQUE DES VACCINATIONS PRATIQUÉES AVEC LA CULTURE ATTÉNUÉE DU MICROBE DE LA FIÈVRE JAUNE, de Septembre, 1885, à Septembre, 1886, par le Dr. Domingos Freire, Professeur de Chimie Organique et Biologique à la Faculté de Médecine de Rio-de-Janeiro, etc. Paris: Librairie J.—B. Baillière et Fils, 19, Rue Hautefeuille. 1887.

This sixteen-page duodecimo pamphlet, though small in size, is weighty. In the preface, Dr. Freire refers to two previous "notes" which he presented before L'Académie des Sciences, one entitled "On the Microbe of Yellow Fever and its Attenuation," and the other a review of "Results Obtained by the Preventive Inoculation of the Attenuated Virus of Yellow Fever at Rio Janeiro."

The present publication is a development of the last "note." Part first gives the mortality of yellow fever at Rio Janeiro, according to the official reports for 1886. The greatest number of deaths were of individuals between the ages of one and thirty years. 1,897 deaths were reported in 1886, of which 313—about a quarter—were native Brazilians. It is believed that

Part second, on "Preventive Vaccinations," shows that for the year ending September, 1886, there were 3,473 inoculations—2,763 Brazilians, 710 foreigners. 489 of the reported Brazilians were very young children of foreigners, and 222 were residents of other parts of Brazil, and were traveling in Rio during the epidemic, and both of these classes are more liable to the disease than those born in Rio, of Brazilian parents. The figures, then, should read: Natives of Rio, 2,053; strangers and children of foreign extraction, 1,421. The vaccinations were made in those parts of the city where the disease developed the greatest intensity, and in the lower class of tenement houses where the hygienic conditions were most deplorable. In the naval hospital at Jurujuba, specially appropriated for yellow fever cases, three patients who had been previously inoculated were conveyed by the health authorities; but the disease was very mild, and these three persons were discharged in a very few days; while 433 "unvaccinated" were victims of the microbe in the same hospital.

Number inoculated in 1886.....	8,478
Number of deaths of inoculated persons....	7
Inoculated in 1885.....	8,051
Of which there died.....	1
Total inoculations.....	6,524
Total deaths of inoculated persons.....	8
Rate of mortality among those inoculated .....	.001
Official number of deaths from yellow fever of persons not inoculated—In 1886.....	1,889
In 1885.....	279
Total deaths of non-inoculated.....	1,668

The number of persons exposed to yellow fever in the epidemic centers is estimated at 160,000. The reported death-rate

of the unprotected is therefore one in 100, while that of the inoculated is about one in 1,000!

These results allow us to foresee that *yellow fever will some day disappear* from the places where it now has its habitat, if preventive inoculations are made universal, and the formation of foci of infection thus becomes impossible.

The "vaccinations" are done gratuitously. They were authorized by order of the Brazilian government, October, 1883.

INDEX-CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, U. S. ARMY. Volume VIII.

That indefatigable worker, Dr. John S. Billings, has prepared another large quarto of over 1,000 pages, indexing the library of the Surgeon-General's office. It reaches, in alphabetical order, the subject of *Medicine*, some 200 pages being taken with this topic and but partly exhausting it. Sixty pages are taken by the subject title *Liver*. The volume includes 13,405 author-titles, representing 5,307 volumes and 13,205 pamphlets. It also includes 12,642 subject-titles of separate books and pamphlets, and 24,174 titles of articles in periodicals. The eight volumes now published contain 86,979 author-titles, 83,155 book-titles, and 278,231 subject-titles of journal articles.

THE PHYSICIAN'S VISITING LIST. Lindsay & Blakiston's.) Thirty-seventh year. 1851-1888. P. Blakiston, Son & Co., publishers, 1012 Walnut street, Philadelphia.

Compactness, convenience and durability are the essential qualities of Lindsay & Blakiston's Physician's Visiting List. Its contents include, besides the usual tables, much useful information, such as "Aids to Diagnosis and Treatment of Diseases of the Eye," by Dr. L. Webster Fox, Clinical Assistant, Eye Department, Jefferson Medical College Hospital, and G. M. Gould; "Disinfectants and Disinfecting;" "Examination of Urine," by Dr. J. Daland, based upon Tyson's, etc., etc.

Following this comes the Visiting List proper, including blank leaves suitably ruled for many purposes.

It measures $6\frac{1}{2} \times 3\frac{3}{4}$ inches, and the smallest size weighs but $3\frac{1}{4}$ ounces, and is only $\frac{3}{8}$ of an inch thick. The large sizes are a little thicker and heavier. It is the smallest and lightest Visiting List published.

ALBANY MEDICAL ANNALS:

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THE MEDICAL ASPECT OF ANCIENT EGYPTIAN HISTORY.¹

BY J. A. S. GRANT-BEY, CAIRO, EGYPT.

Prof. Virchow, in discoursing not long ago to a learned body at Berlin, said that medicine was the only science that had a continuous history for three thousand years; but I shall endeavor now to show you that we have a more or less continuous history of medicine for nearly six thousand years.

The Egyptian god Thoth, who corresponds to the Greek god of letters, Hermes, and the Roman messenger of the gods, Mercurius, is represented as being the author of the forty-two sacred books of the ancient Egyptians. Six of these books were medical, and by them the Pastophor, or embalmer, was guided in his anatomical manipulations on the dead body in process of

EMBALMING.

It has been said that the real reason with the ancient Egyptians for embalming the dead body was their belief that the soul would eventually return to it; but I am inclined to think that there was a sanitary object as well, for the embalming was not confined to the human body merely, but to the lower animals, such as bulls, crocodiles, cats, rams, hawks, ibises, etc.

¹ Abstract of a lecture delivered in the Albany Medical College, Saturday, October 1887.

They were wonderfully cunning people, the ancient Egyptians, and more especially the priests, who monopolized the highest grade schools, and plied their knowledge to make the common people work with a will.

There were three ways of embalming practiced by the Egyptians.

The first and most expensive way was effected as follows: The brain was carefully and effectually extracted by breaking into the skull through the nose, and in this way the brain was spooned out, and some antiseptic put in its place, generally tar. An oblique opening was made five or six inches in length on the left side of the abdomen, a little above the crest of the ilium, and the cadaver was eviscerated by this opening, and the cavity filled with a composition of myrrh, cassia, etc. The intestines and other internal organs were washed in antiseptics and packed into canopic vases, with aromatics and antiseptic spices. These vases were four in number, and their lids were carved in the shape of the head of a jackal, a monkey, a human head, and a hawk's head. These were the four genii of the dead, who guarded these special parts of the body put in these vases. The cadaver was now steeped in natron for seventy days, then washed and swathed in bandages, and was thus handed over to the family. Upwards of \$2,500 were paid for this process.

The second process was cheaper, and may be described as follows: A substance called the oil of cedar was forced into the interior of the body through small openings in the thorax and abdomen. This was said to have dissolved, or, rather, desiccated the internal organs, so that they could be removed without mutilating the body. The body was then steeped in a solution of natron (native carbonate of soda) till the body shrivelled up, when it was taken out, washed and swathed in bandages.

The third process was inexpensive. The whole body was simply salted for seventy days, and then given back to the friends.

PREScriptions.

Manethe, the Egyptian priest and historian, during the reign of Ptolemy Philadelphus, 250 B. C., writes that it was in medicine that ancient Egypt attained any real scientific eminence. According to this author, King Teta, the second king of the first dynasty, 4000 B. C., wrote treatises on anatomy and surgery, and performed surgical operations with flint flakes.

About 3000 B. C., during the reign of Cheops, the builder of the great Pyramid, a medical papyrus was found by a priest in a temple, and one of the prescriptions in it was as follows: "Sing a religious hymn, then say a magical text," in order to drive away a disease or evil spirit.

When medicine was taken to cure a disease, then an incantation or formula was said at the time of taking it, that the drug might do its work swiftly and well.

This medical work is mentioned in the Berlin Papyrus as having been first composed in the reign of Sent, a king of the second dynasty, 3,300 years before Christ.

The oldest medical papyrus we now possess does not go back beyond the eighteenth dynasty, 1600 B. C. By that time medicine was already in as advanced a state as in the time of Galenus Claudius, at the end of the second century of our era.

The various diseases known were carefully classified, and their symptoms minutely described, as well as their treatment. The prescriptions recommended in each case are made out in precisely the same way as the prescriptions of modern doctors. One of these was derived from a famous Semitic oculist of Byblos, near Mount Lebanon; but the greater part belonged to earlier Egyptian medical men who flourished under the first dynasties.

The preparations used were of four kinds: Draughts, blisters, powders and clysters, minerals as well as vegetables being employed in their composition.

According to this papyrus, which is called Eber's Papyrus, there were more than twenty different kinds of eye diseases.

In the latter days of Egyptian history, magical formulæ and exorcisms began to take the place of the older prescriptions. Diseases were referred to the malignity of evil spirits, and the priest and sorcerer superseded the physician. A Demotic papyrus at Leyden is almost wholly occupied with charms, especially with love philters.

Progress in medical knowledge was checked in the time of the middle empire, on account of the rule that new medicines and treatment were adopted by the doctor at the risk of being put to death if the patient died.

In the writings of Moses (1500 B. C.) the priests were the physicians, and their treatment mainly aimed at promoting cleanliness and preventing contagion.

GYNECOLOGY.

In his time we read of Pharaoh having a personal interview with two Hebrew midwives, who must have been very celebrated in their day to account for their names having been handed down to us in Holy Writ; and if I were to ask Prof. Sayre, of New York, why these Hebrew midwives had become so distinguished, I have no doubt he would admit that they received their instruction originally from the Egyptian midwives, who, long ere the Hebrews knew their A, B, C's, were not only proficient in what we call in a popular way "midwifery," but who were specialists in its various departments.

Now, it may be perfectly true, as Prof. Sayre stated at the late meeting of the Gynecological Society at New York, that America had given birth to gynecology, but I may be permitted to say with the dorky, that in Egypt gynecology "grewed," and has existed there as many years as it has hours in America.

As far as the Egypt of the present day, however, is concerned, I must confess that its gynecology has not advanced in proficiency with its advanced years, but a laudable attempt is now being made to infuse European, not to say American, gynecological knowledge into the native Hakimat (doctoresses), and we hope in time to reflect back on the Occident a brighter light than we have derived from it. In the meantime, we ask for the moral support and encouragement of the medical profession in our work out there, where official and political obstacles are thrown in the way of every attempt made to advance the medical department.

MASSAGE AND FAITH CURE.

In the twentieth dynasty, about 1400 B. C., when Rameses XII. was in Mesopotamia, a country that had been conquered by Egypt, the chief of the land of Bakhtan brought to His Majesty his beautiful daughter, with whom Rameses was charmed so that he married her, and called her Ra Noferoo (the most gracious of Ra). The name thus given her indicated how he was enamored of her.

After Rameses returned to Thebes in Egypt, and had been there some time, ambassadors came from Bakhtan to beg Rameses to send some one to heal Bint Rash, the little sister of Ra Neferoo, who had an evil movement in her legs.

Rameses ordered all those learned in mysteries to appear before him, and he chose from amongst them Tahuti-em-heb, a

royal scribe, who was intelligent and skilled with his fingers (massage); and so this doctor was sent to Mesopotamia to the chief of Bakhtan to heal his daughter. When he reached his patient, he found her under the influence of evil spirits that his massage and medicine could not control, so he sent word back to Egypt to have a god sent to exorcise the devils. Rameses sent an image of the god Khonsu (the war god of the Egyptians), which was received with great pomp in Bakhtan. The cure was immediate (faith cure or mind cure), and the god Khonsu was installed in the city of Bakhtan. How many further cures he effected is not related, but I can imagine that pilgrimages from far and wide would trudge frequently to Bakhtan to experience the healing power of this image.

We now come to the

GREEK HISTORICAL PERIOD,

dating from about 900 B. C. Hesoid and Homer appear on the scene. Herodotus, who wrote about 450 B. C., tells us that Hesoid preceded Homer, and these celebrities both manifest a considerable knowledge of Egyptian learning, and the medical terms used by Homer became classical words in the history of medicine.

Hecataeus, the son of Hegesander, who flourished about 560 B. C., dwelt a long time in Egypt as a student; but how much these Greeks learned in Egypt we can only guess, as they were great plagiarists, and therefore wished to palm off on the Greek world Egyptian learning as if it were their own.

Herodotus, however, is so far honest, as to tell us that he had a high opinion of the Egyptians. He says that not only were things better managed in Egypt than in Greece, but Greece had even to go there for its theology, and he might have added for its medicine also.

Following up the medical line, we now come to speak of Hippocrates, who is considered to be the father of medicine. He flourished about 480 B. C. He also owed much to Egyptian medicine, and his system of the practice of medicine was said to have been expectant, and would correspond to the Homœopathic creed of the present day. He was very strict on diet and regimen, but was often blamed for letting his patients die through doing nothing to keep them alive. He recommended trephining the skull in injuries of the head, and through his mentioning

succussion in connection with fluid in the thorax, our modern auscultation was discovered by Laenneec.

The history of medicine after this is more or less Greek, Roman and Arab, which need not be touched on here. I may, however, say that after having acquired a general knowledge of medicine and surgery, the ancient Egyptian medical men took up specialties. Cyrus and Darius, kings of Persia, about 500 B. C., sent to Egypt for physicians. The former was afflicted with a nasal polypus, the latter with ophthalmia. So a rhinologist was sent in the one case and an oculist in the other.

CIRCUMCISION

was common amongst the Egyptians in the fourth dynasty, 3300 B. C., and probably existed amongst them much earlier. Herodotus considered that the Egyptians were the originators of this rite, and that it spread from them to other places. I believe myself that it originated among primitive people independently of each other, and more as a sanitary precaution than for any religious purpose. The prepuce seems to me to be an unnecessary and even dangerous appendage when cleanliness is neglected. I have seen some frightful conditions produced by a neglected prepuce. Its only use seems to me to serve as an analogue, and can therefore be very easily and, in many cases, very advantageously dispensed with. Circumcision can be traced from China to the Cape of Good Hope. It is practiced in the South Sea Islands, in the West Indies and in Mexico; also among some of the tribes in South America. Herodotus asserts that the Hebrews and Phœnicians, the Ethiopians, the Kolkhians, the Makronians and Hittites, to which Josephus adds the Arabs, learned the rite of circumcision from the Egyptians. Amongst the Jews this rite is performed on the child when he is eight days old, and if the eighth day happens to be Sabbath, it has to give place for this rite to be performed, which shows what an important place it has in the Jewish religion. Amongst the Arabs, on the other hand, it is generally performed on the child when thirteen years of age, this having been the age of Ishmael, their progenitor, when he was circumcised. The Kaffirs perform this rite still later in life. Circumcision is also practiced among the Christian Copts and Abyssinians, and that, strange to say, both in the male and female. The Egyptians considered the Greeks unclean, not merely because they killed the cow, but because they ate swine's flesh, and did not practice circumcision.

Having thus introduced you to the medical aspect of ancient Egyptian history, I shall now direct your attention to these antiques which lie before you, the description of which will give you some idea of the ancient Egyptian mythology.

FISSURA ANI;¹

ITS BIBLIOGRAPHICAL, ETIOLOGICAL AND PATHOLOGICAL REVIEW, WITH SUGGESTIONS REGARDING A METHOD OF RADICAL TREATMENT WITHOUT THE KNIFE, FOUNDED UPON THE WRITER'S PERSONAL EXPERIENCE.

BY F. E. MARTINDALE, M.D., POET RICHMOND, N. Y.,

(ALBANY MEDICAL COLLEGE, 1853.)

Chief of Staff of the Nursery and Child's Hospital, Staten Island; Visiting Surgeon to the S. B. Smith Infirmary, Staten Island.

No member of the medical profession, without a personal acquaintance with the symptomatology of fissure of the anus, can arrive at even an approximate conception of the significance of the term or the intensity of the suffering resulting from the lesion, for no description drawn from the current medical literature on the subject can do this modest and retiring surgical disability that æsthetical justice to which it is properly entitled.

From a limited examination of the bibliography of the subject, I have reached the conclusion that any special acquaintance with the pathology of the lesion may be limited to a period ranging but little anterior to the year 1848. Dr. George McClellan, in a treatise on surgery published in Philadelphia in 1847, makes no mention of it. The more elaborate work on the same subject by the late James Miller, Professor of Surgery in the University of Edinburgh, published in 1848, describes it as a chap or crack of the bowel, that is the seat of much pain, and often of intense agony. From this author is obtained the first clear description of this lesion, which, in the relation of its chief symptom, has suggested the possibility of its having been based upon experience other than mere clinical.

Dr. John Mill, in his Compend of Surgery, published in Philadelphia in 1864, describes it as an ulceration or cracking of the skin on the verge of the anus, attended with intense pain, especially upon going to stool.

¹ Read before the Medical Society of the County of Richmond, October 5, 1887.

Dr. Samuel Gross, referring to it in the second of the two volumes on surgery published by Blanchard & Lea in 1864, says of it that "it extends from the skin upwards through the mucous membrane in the form of a groove-fissure or gutter," that it varies in length from half an inch to an inch and in width from half a line to a line," and that "its bottom is of a greyish whitish appearance and often incrustated with aplastic lymph." Dr. W. F. Clarke, Assistant Surgeon to Charing Cross Hospital, London, in a Manual of the Practice of Surgery published in 1879, says of it that "the mucous membrane at the verge of the anus is apt to become cracked or fissured," and that "this may often be found at the base of an external pile."

Dr. Jeremiah McCarthy, Surgeon to the London Hospital, in a monograph on this subject in "Heath's Dictionary of Practical Surgery," published in 1886, says that "the affection of the anus usually known as fissure, is really an ulcer of the mucous membrane at or immediately above the margin of the sphincter, is somewhat oval, with the vertical diameter greater than the transverse," that it "is generally situated on the posterior wall, and occurs more frequently in females than males."

Regarding its etiology, opinions seem to differ. Prof. Miller attributes it to "mal-nutrition;" Dr. Mill regarding "dyspepsia" as its chief etiological factor; Dr. Gross considers that it "comes on without any assignable cause;" Dr. Clark, that "it is generally associated with a disordered state of the stomach," and that sometimes it appears to depend upon syphilis;" and Dr. McCarthy that "its etiological factors are, (1) 'a sedentary life,' (2) 'congestion of the liver,' and (3) 'possibly internal piles.'"

All of the learned authorities quoted lay great stress upon disturbances of digestion as its *chief* etiological factors, an assertion the writer regards as subject to doubt, if not absolute denial, his personal experience of this lesion leading him to the conclusion that, in most cases, the chief etiological factor will be found to be an old incision for the relief of either internal or external hemorrhoids. In his own case, in which the first symptoms date back some years, there is a reasonable certainty that this was the starting point of the lesion, the fact being that the hemorrhoids were located where the fissure has since developed, and that the operations for their relief were on different occasions performed by himself, the probability being that the several incisions were not made sufficiently deep for the expulsion

of the entire clots. Granting that disturbances of digestion constitute important etiological factors in this connection, they are by no means *the chief*, as the authorities quoted taught and believed, but simply consecutive.

When a careful physical examination is made in these cases to determine the seat of the lesion, there will be found, as in the writer's case, a solution of the continuity of the mucous membrane covering the connective tissue lying between it and the sphincter, and if also, as in his, the lesion has reached the stage of clonic spasm of that muscle, ulceration through its superficial fibres will be demonstrated on a specular examination. This disability, at the stage of its progress at which surgical relief is usually sought, will be found to be about three-fourths of an inch in its long diameter, one-sixteenth to one-eighth in its short and from one-sixteenth to one-fourth of an inch in depth, and closely resembling what might be expected from an originally clean cut incision for the relief of hemorrhoids, situated either internally or externally, the only difference being, in respect of the former, as regards its situation, that it will be found from an eighth to a quarter of an inch from the edge of the sphincter, when, in the latter, it will lie in continuity therewith. It will always be found at right angles to an imaginary line subtending the chord of the sphincter at its point of location. In my own case it lay about one-fourth of an inch to the left of the perineal junction of the two lateral halves of that muscle.

If the ulcer is an old one, and has not been subjected to treatment, it will probably be found with its lateral edges raised and everted and sufficiently deep to have involved the superficial fibres of the sphincter.

Incising an internal or external hemorrhoid relieves pain, tension and spasm of the sphincter by emptying an inflamed and distended venous plexus and thereby equalizing pressure. In so far as this is perfectly accomplished, speedy resolution is promoted, and presumably, in the large majority of instances, the wound heals promptly and no permanent lesion results. Occasionally, however, this favorable termination is not attained, and here is where any preëxisting disturbance of the general health becomes an important factor to that end. Assuming the incision to have been insufficient for the expulsion of the whole of the hemorrhoidal clot, as was doubtless the fact in my own case,

subsequent decomposition of the retained portion precludes resolution, and ulceration is quickly established by the formation of a pyogenic membrane, and the sero-purulent discharge of the formative stage of fissure of the anus is the result, a pathological condition usually denominated, I believe, *itching piles*. At this stage, cauterization and due attention to the bowels and ingesta is generally sufficient to effect resolution; but the symptoms are not usually of so urgent a character as to alarm the yet undisturbed subject of the lesion. Repeated and prolonged overindulgence, in respect of the quality and quantity of ingesta, keeps up the congestion of the portal circulation and the consequent overdistension of the hemorrhoidal veins, that supplies the most favorable conditions for the rapid progression of the ulcerative process. Constipation in these cases becomes a habit, relieved only by active catharsis at intervals, until finally, after the lapse of months, or perhaps years, the muscular fibres of the sphincter become implicated, and thereafter the sense of weight in the perineum becomes more and more aggravated, and the pain at stool more intense, until at last tonic spasm of the sphincter renders the sufferer's life a burden. The more deeply the ulcerative process advances into the circular fibres of that muscle, the more intense the spasm. The average subject of this lesion does not bear this strain indefinitely without serious consideration of methods for his relief, and he finally calls upon his family physician, who, if not conversant with the pathology of the case, recommends him to consult a specialist in this class of surgical disabilities. This advice he follows, and learns, for the first, that he must undergo an operation for his permanent relief. The idea is repugnant to him, but, after waiting and hoping against hope for some change for the better, he at last reluctantly submits to the knife, and reaches the end of his suffering with the loss of perhaps a week or ten days from his business. Such is by no means an overdrawn description of this painful lesion in its several stages, and it was in the hope of escaping, if possible, some of the tortures mentioned, and at the same time of avoiding the loss of business which the continuous and exacting demands upon his professional services would have entailed, under operative measures, that the writer assumed the treatment of his own case, and after carefully locating the lesion at the left of the perineal portion of the sphincter with the right forefinger, thoroughly lubricated with vaseline and

introduced into the rectum, a small roll of carbolized cotton, saturated with carbolized vaseline, one part to thirty, and sprinkled with iodoform, was held by the left hand, until, the right finger being withdrawn sufficiently, without relaxing the sphincter, to push it past that muscle and between the everted lips of the fissure, the suppository could be retained in situ by its contraction. Naturally the operation was somewhat painful without cocaine or morphine, but it was by no means as difficult of performance as might be imagined. Success following the effort, so likewise did an intense aching at the seat of the lesion, which subsided only after the professional labor of the day was over and he could indulge in the relief that always comes, in these cases, with the recumbent position. Rest and its attendant sleep being finally attained, the morning found him ready for the effort for removal of the old and its replacement by a fresh and somewhat larger suppository, medicated as before. This second attempt proved to be a severe trial of the writer's patience, fortitude and perseverance. Success was again attained, however, as likewise an intensity of pain, which was only finally allayed by the further introduction of a small suppository of morphia, gr. 1, atropia sulph. gr. 1-50. Relief being secured by this means, no further difficulty was experienced. The following evening the second suppository, after some little effort, was removed and replaced by another of the same anodyne medication as before. This completed the local treatment, any action of the bowels being checked by the morphine. On the evening of the third day from the introduction of the first suppository three grains of calomel were taken, which on the morning following, much to the writer's surprise, operated without pain. Sufficient time has since elapsed to determine conclusively that resolution has been finally attained—by the absence of pain during and after defecation, and the further evidence, by the finger in the rectum, that the fissure has disappeared.

The suggestion from which the idea of this method of treatment originated in the writer's mind was derived from a statement in the work of the late Dr. Samuel Gross, that "partial division of the sphincter is not essential to a radical cure of fissure, scarification of the base of the ulcer having proved in his hands sufficiently effective." He reasoned thus: If scarification with the knife has been successful in Dr. Gross' hands,

why should not the irritation resulting from the spasmodic contraction of the sphincter upon rolls of medicated cotton placed within the walls of the fissure prove as successful in his? There is always found in this lesion, if of long standing, a pyogenic membrane of a greyish appearance and villous texture. No resolution of the ulcer can take place until this has been destroyed by some germicide. The question may be asked, should not its destruction be better accomplished by the method proposed than by more painful scarifications through an anal speculum? The result in his own case would seem to suggest an affirmative response to the inquiry. Bearing in mind the fact that for the two days of treatment the writer was continually on the road in the fulfillment of his professional duties, it will be readily seen how effectually pressure from contraction of the sphincter was secured.

An important suggestion in connection with the proposed treatment of this lesion as described, especially in the interests of the patient, is to the effect that the additional medication of the cotton suppository with from one-half to a grain of morphia and one-fiftieth to one-thirtieth of a grain of atropia would be of great advantage in relieving spasm of the sphincter and allaying local irritation.

The method suggested will, it is believed, if applied directly to the ulcer, as proposed and demonstrated in the writer's case, prove prompt and effective for the radical relief of fissure of the anus, in the large majority of cases, within from two to four days.

ALBANY: A SANITARIAN VIEW.

The Committee on Hygiene and the Relations of the Profession to the Public respectfully report:

There was referred to it a portion of a paper recently read before this society by Dr. W. O. Stillman, which pertained to the issuing by the Board of Health regulations to plumbers. The paper was considered with pleasure, inasmuch as it is a timely presentation of an important matter. When the Board of Health was consulted in the matter, it was learned that some time previously they had given the subject their attention and would consider it further. It was deemed advisable to allow the matter to rest for the present. There certainly is need for

better plumbing in some cases, but a greater need is that the plumbing we have be kept clean and wholesome. The carelessness on the part of many housekeepers in this regard is astounding. Iron sinks in kitchens, hand-basins, bath-tubs and stationary wash-tubs, with their waste-pipes, are allowed to become disgustingly foul. The kitchen sink, especially, is often made a receptacle for the water in which dishes and cooking utensils have been washed and also in which meats and vegetables have been rinsed. It is seldom that a thorough cleaning with caustic potash is given it, and in time there is an accumulation of filth composed of decaying animal and vegetable matter which must give more or less effluvium to be carried throughout the house to vitiate the air in all apartments. The water-closet basin also is often allowed to become filthy with material that has no business to be left any time in a house. These are matters which concern the families; in the nature of the case they do not come under the observation of the Board of Health. They do frequently come to the notice of the attending physician, and he it is who should sound the tocsin and suggest the remedy. Back yards are allowed to become dumping grounds in some localities. Decayed vegetables and fruits, bones, cinders, old boots and other refuse compose the heap, forming a cradle for disease germs. The melting snows in spring wash a solution of this filth into areas and basements, where it finds the necessary conditions for becoming a hot-bed for these germs. The removal of this cause of ill-health is properly the work of the Health Board, and it is but just to say that they have been active in abating such nuisances, having caused, within the year, the cleaning out of many hundreds of filthy yards. Much has been done, but much still remains to be done. Practical work along this line can be performed by the general practitioner, and hearty coöperation with the properly constituted health authorities will hasten sanitary reform.

While the majority of cases of typhoid fever are due probably to polluted drinking water, it is generally conceded that diphtheria, scarlet fever and consumption find a medium for their propagation in unsanitary domiciliary conditions. This is shown to some extent by a review of the death register kept by the Board of Health. We say a review of the death register, because, unfortunately, there is no accurate record, as yet, of cases occurring, but not terminating fatally. It is to be regretted that the Board of Health have been obliged to publicly threaten

to prosecute physicians for failing to do that which, it would seem, every physician would consider necessary to be done. Their action, however, we deem to be proper, for a failure to report is in direct violation of our sanitary code, and an accurate record of contagious, infectious and "filth" diseases is the only means by which we are enabled to determine the relative healthfulness of our own city as compared with that of others, and the comparative healthfulness of the various parts of any one city.

Your committee has endeavored to ascertain some facts in regard to some in this class of diseases, and, in doing so, has obtained the street, number of house and ward in which every fatal case of typhoid fever, diphtheria, scarlet fever and consumption has occurred between the dates of August 1, 1886, and July 31, 1887, as also the months; it has more or less carefully inspected the several localities, and in some cases the houses and yards, also informing itself as to the existence or non-existence of sewers in the several localities. The committee finds there have been reported 11 deaths from scarlet fever, 23 deaths from diphtheria, 80 deaths from typhoid fever, and 334 deaths from phthisis pulmonalis. It may be objected by some that consumption ought not to be placed in the list with diphtheria, scarlet and typhoid fevers, but your committee, while not entering upon the contagiousness of phthisis at all, contend that, being a disease very largely dependent upon damp, ill-ventilated and overcrowded dwellings, quite as much so, indeed, as upon climatic conditions, it is properly to be considered in this connection.

[Four charts were exhibited showing localities and dates of deaths from phthisis, diphtheria, scarlet and typhoid fevers.]

It is found that, as regards phthisis, the Twelfth, Fifth, Third, First, Eleventh and Sixteenth wards, in the order named, furnish the largest number of deaths, ranging from 32 down to 20. It is found, also, that while not a ward in the city is exempt from deaths by this dire disease, those in which the population is most crowded together, in which basements are most likely to be damp, either from surface drainage or back-flow of water from the sewers, in which there is the greatest squalor, are the ones from which Death has gathered his greatest harvest, and *vice versa*, for the Seventh and Fourteenth wards furnish the least number of deaths. As regards diphtheria, the Second and Seventeenth wards furnish the largest number of deaths, while in five of the seventeen wards there was not a single death. As

regards typhoid fever, the First and Fifth wards furnish the largest number, while the Thirteenth is the only ward in which a death did not occur. The death register gives only six deaths by typhoid fever in the Seventeenth ward, and it is an ascertained fact that at least three times that number of cases occurred in that locality, but they recovered, and as the law does not require the reporting of these cases, there is no record of them. The soil in that portion of the city is a sandy loam; the drainage, though better now than formerly, is far from good; many of the lots have wells on them, and some of them have privy-vaults in close proximity (this condition of things is being rapidly altered, however). Under such conditions we should expect to find many cases of typhoid, but it would be well if there was a record, the consultation of which would either confirm or refute the supposition. In our consideration of this disease there is a noticeable circumstance that must not be lost sight of; that is, the proportion of deaths to the number of cases in the upper and outer wards as compared with that in the lower and inner wards. Here we have another example of the baneful effects of the close, foul air coming from reeking yards and foul basements. The evil is not so much that any special form of disease is produced (Albany is very free from endemics and epidemics), but that there is produced a tendency to succumb to any and every disease; in other words, the vital powers, and hence the ability to resist morbid influences, are very greatly reduced by a want of household sanitation; this being true, there is increased liability to a serious epidemic, should occasion offer.

Your committee desires to publicly extend its thanks to Mr. Edward Long, the secretary of the Board of Health, for the efficient aid he has rendered in obtaining material for this report.

Believing it to be essential that a public record of typhoid fever be kept, the following resolution is presented:

Resolved, That it is the sense of this society that physicians ought to report their cases of typhoid fever.

[For discussion, see page 356.]

Respectfully submitted,

E. A. BARTLETT,
H. E. MERENESS,
J. W. M. SHATTUCK,
F. C. CURTIS.

ABSTRACTA.

"DOCTOR, what do you think of the new treatment for consumption by injecting carbonic acid into the rectum?

"Well, it certainly, distracts the mind of the patient for a while, and may do good by its moral effect by making him think of his latter end; he becomes, as it were, conscious of his rectum, as the schoolboy rendered *mens conscia recti*. He may even 'bacilli' enough to cherish the hope that he is getting cured, and is taking a short cut to health over this *pons asinorum*, but I regret to say that I think it will end as it began—in gas."—*Medical World*.

TOBACCO AMBLYOPIA.—Dr. George Howe, of Columbia, S. C., after reporting two cases (Trans. S. C. Med. Ass'n, 1887), raises the question as to whether there is or not a true amblyopia from the use of tobacco. Both of them were also drinkers. He quotes numerous authorities to show that it is not so much tobacco that causes amblyopia or amaurosis as it is alcoholic drinks. In Turkey, where smoking is the habit, amaurosis is rare. Minor, to test the matter in some cases, interdicted alcoholic drinks, but allowed his patients to continue the use of tobacco, and they got well. Dr. Howe is disposed to give alcohol the credit of bringing about this impairment of vision rather than tobacco. All his cases have been drinkers as well as smokers. His treatment is abstinence from both, and beginning on $\frac{1}{32}$ gr. of sulphate of strychnia, gradually increasing until signs of its physiological action are seen.—*Virginia Medical Monthly*.

THAT sewer gas may be a carrier of the germs of infectious diseases is now but little doubted, and sound plumbing is looked upon as one of the best prophylactics against the spread of disease. That sewer gas itself is poisonous, even when it does not convey the germs of infectious disease, is not generally understood. We remember once to have heard a popular lecturer on medicine say that "it would be enough to kill a man to hold his head for half an hour over a sewer opening," and this no doubt chimed well with popular belief; nevertheless, the impunity with which workmen remain for hours in sewers in active use indicates that sewer gas is not under all circumstances a very active poison. A paper by Dr. Henry Hun, of Albany, goes into this subject, and finds a class of symptoms which it attributes to the inhalation of sewer gas. The most constant of these symptoms are loss of appetite, extreme prostration and pain in the head. Sore throat of a diphtheritic type is also to be attributed to this cause, as well as fever, general debility, neuralgia, and perhaps myelitis of the anterior horns.—*Northwestern Lancet*.

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

EDITORIAL COMMITTEE:

F. C. CURTIS, M.D.,

A. VANDER VEER, M.D.,

LORENZO HALE, M.D.,

JNO. BEN. STONEHOUSE, M.D.,

WILLIS G. TUCKER, M.D.

VOL. VIII.

NOVEMBER, 1887.

NO. 11.

BOOK NOTICES.

TRANSACTIONS OF THE ASSOCIATION OF AMERICAN PHYSICIANS. Second Session.

This association, although only a year old, has to record the death of three of its members, and all of them were from this state—Drs. E. D. Hudson and T. A. McBride, of New York city, and Dr. Thomas F. Rochester, of Buffalo. The second session was held at Washington and lasted two days. Dr. William H. Draper, of New York, was elected president, and Dr. Henry Hun, of Albany, secretary. Seventeen papers were read and discussed. "Hepatic Cirrhosis in Children" was the subject of a lengthy paper by Dr. R. Palmer Howard, of Montreal, and dealt especially with the causative relations of sixty-three collected cases of this rare disease of childhood. A probable cause was found in about half of them, the excessive use of alcohol, hereditary syphilis and tuberculous disease being the chief factors; the relation of the acute infectious diseases as a cause was further favored by the author, and also food that is irritating to the liver. The antipyretic treatment of fever called forth papers by Dr. H. C. Wood and Francis Minot, as well as lengthy and interesting discussion. Gaseous enemata in consumption received attention in these papers, the conclusions from which may be regarded as negative or unfavorable. A noteworthy paper by Dr. Henry Hun has been abstracted from at some length in a recent issue of this journal.

The volume makes a valuable mass of contributed material to current medical literature.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.

ABSTRACT OF MINUTES OF STATED MEETINGS HELD FROM NOVEMBER 24, 1886, TO APRIL 27, 1887, INCLUSIVE, AND OF THE ANNUAL AND SEMI-ANNUAL MEETINGS.

The first intervening meeting was held Wednesday evening, November 24, 1886.

Present: Lorenzo Hale, president, and Drs. Ball, Bartlett, Bendell, Blair, Classen, Clark, Cook, Culver, W. H. Craig, Curtis, DuBois, Dwyer, Fleischman, Hailes, H. Hun, Houston, LaMoure, Mereness, Mitchell, Morrill, Morrow, Munson, H. S. Paine, Russell, Sands, B. U. Steenberg, Stillman, Thompson, Van Allen, Vander Veer, Winne, Woodward; also Drs. Capron, Kathan, Parent, Rulison.

The president delivered an introductory address and appointed committees.

On motion of Dr. Vander Veer the reading of the minutes of the last intervening meeting were dispensed with.

That part of ex-President Steenberg's address pertaining to "Observations on Diphtheria," and which had been voted the subject for discussion at the present meeting, was re-read by the secretary. Discussion followed upon the combined topics of Diphtheria and General Sanitation as presented at the annual meeting by Dr. E. A. Bartlett, chairman of the committee on hygiene.

Drs. Hailes, Classen, Stillman, Vander Veer, Russell and Curtis took part in the discussion. [Papers were published in the ALBANY MEDICAL ANNALS, October and November, 1886. For discussion, see page 274, September, 1887.]

Dr. WM. HAILES, Jr., from the committee on resolutions appointed at the memorial meeting called to take action on the death of

DR. JOHN E. HALL,

of Green Island, reported the following, which were unanimously adopted:

WHEREAS, We, the members of the Medical Society of the County of Albany, have learned of the untimely death of our late member and friend, Dr. J. E. Hall,

Resolved, That we cause to be entered upon the minutes of this society our warm recognition of the devoted manner in which our late associate performed the various duties of his professional life; that we also make record here of the integrity of character, the earnestness of purpose, and the gentle courtesy which he invariably exhibited as he moved among us.

Resolved, That the secretary be instructed to convey to the family of our late friend the assurances of the deep sympathy of this society and in our common loss.

A. T. VAN VRANKEN,
W. B. SABIN,
S. A. RUSSELL,
T. FEATHERSTONHAUGH,
WM. HAILES, JR.

Dr. GEORGE S. MUNSON read a paper entitled "Cold Applications in Eye Diseases," which was discussed by Drs. Bendell and Culver. [See ALBANY MEDICAL ANNALS, page 853, December, 1886.]

Dr. A. VANDER VEER exhibited

A LUMBRICOID WORM,

with the following history: M. M., boy, aged three years, swallowed a vest button one afternoon. His mother gave castor oil. Convulsions succeeded. Dr. White was called. Next morning at about five o'clock the child passed *per anum* this button and this *ascaris lumbricoides*, about eight inches

long, incarcerated by having passed about half an inch of its narrow anterior extremity through the eye of the shank of the button.

Dr. H. HUN presented a specimen showing a lesion of typhoid fever.

The society adjourned.

The second intervening meeting was held at Alumni Hall, Wednesday evening, December 15, 1886.

Present: President Hale, Drs. Babcock, T. P. Bailey, Bartlett, D. C. Case, Cook, J. D. Craig, Curtis, Fleischman, H. Hun, Keegan, Larkin, Morrow, Munson, Russell, Shanks, Townsend, G. L. Ullman, Van Allen, Van Slyke.

The minutes of the previous meeting were read and approved.

The treasurer, Dr. S. A. Russell reported, as to the finances of the society, that many of the members were in arrears for dues, some for several years; that some members in arrears upon the books say that they are not, and trusted that the society would decide whether the testimony of the books or the statement of the individual should be taken in the matter where the two conflict.

The president suggested that dues of six years' standing were canceled by the statute of limitations.

Dr. CURTIS thought it advisable for the treasurer to report at the semi-annual meeting the names of all delinquents.

The subject was further discussed by Dr. Bailey, Cook, Keegan, Bartlett and Munson, but no definite course of procedure was adopted.

Dr. HENRY HUN read a paper on "Cerebral Localization," with many illustrations. [See ALBANY MEDICAL ANNALS, January, 1887.]

Drs. Russell and Bartlett participated in the discussion.

The President, for himself and the society, thanked Dr. Hun for his valuable contribution to the subject, and requested the continuation of the paper at an early date.

The same sentiment embodied in a resolution offered by Dr. Bartlett was unanimously adopted.

The society adjourned.

Third intervening meeting, Wednesday evening, December 22, 1886.

There were present: President Hale, Drs. Babcock, T. P. Bailey, Bendell, Bigelow, Classen, Cook, Cooper, J. D. Craig, W. H. Craig, Curtis, Dwyer, Fleischman, Fowler, Gorham, Hasbrouck, of Kingston, Hoadley, Houston, Hun, Keegan, Mereness, Morrill, Morrow, Munson, Rulison, B. U. Steenberg, Thompson, Van Allen, Vander Veer.

The minutes of the previous meeting were read and approved.

Dr. J. H. MITCHELL, of Cohoes, read a paper on "Erysipelas of the Face, Followed by Gangrene," and exhibited a photograph illustrative of a case.

The paper was discussed by Dr. Houston. [See ALBANY MEDICAL ANNALS, pages 115, April, 1887.]

Dr. H. Hun concluded the reading of his paper on "Cerebral Localization."

On motion of Dr. Keegan, a rising vote of thanks was tendered Dr. Hun for his valuable paper.

Dr. Vander Veer and Dr. Bendell took part in the discussion of Dr. Hun's paper.

Dr. VANDER VEER expressed his indebtedness and that of the society to Dr. Hun for his valuable paper. When he looked back to his student days contemporary with the pioneer but immature experiments upon the cerebrum and cerebellum of pigeons, the progress in the direction of cerebral localization seems remarkable. The great advance in certainty in localization is of especial advantage to surgeons, as cases recently reported have evidenced. Dr. Vander Veer referred to a case of his own, a soldier,

from the left hemisphere of whose brain he had removed a bullet, and who is still living. The case of Mr. B., reported in Dr. Hun's paper was peculiarly interesting, in that he was a patient of his own at the time when Dr. Clymer was a lecturer at the Medical College, and at one of Dr. Clymer's clinics Dr. Vander Veer presented the first case, clearly diagnosed as sclerosis of the posterior columns of the cord, a case reported jointly by Drs. Seguin, Shaw and himself. In Mr. B.'s case, Dr. Vander Poel considered that in the third week of the disease the condition was one of cerebral anæmia, and that stimulants were indicated.

Dr. VANDER VEER presented a pathological specimen of

GALL-STONES,

with the following report of autopsy: Autopsy held November 18, 1886, by Dr. E. E. Larkin. Present: Drs. Vander Veer, Larkin, Morgan, and medical students Broga, Smith and McDonald.

Mrs. M. S., aged 48, American, married, mother of seven children. Last menstruation three months ago. Noticed enlargement of right hypochondriac region two or three months ago. She applied a bandage and said nothing to friends until a week ago, when she called her physician's attention to the enlargement and complained of pain. She passed a considerable amount of blood per rectum. Wednesday, November 17, after a severe hemorrhage from the stomach, she died.

Post-mortem twenty-four hours later. Patient well nourished, jaundiced. Rigor mortis well developed. Crucial incision was made through the abdominal walls. Liver was enlarged, weighing nine pounds. The surface was mottled and roughened. It was softer than normal. On section, very extensive changes were evident, undoubtedly cancerous. The spleen was enlarged to four times its natural size. The kidney was congested. The gall-bladder contained two large calculi weighing respectively 600 gr. and 74 gr. No further examination was made.

Dr. P. J. KEEGAN spoke upon the subject, giving the history of a unique case.

Dr. H. BENDELL exhibited an Enucleated Eye, and gave the history of the case.

Dr. A. VANDER VEER exhibited a Mammary Tumor, Alveolar Cancer, of a few months' growth, which was of interest on account of its resemblance to the liver previously exhibited.

Adjourned.

Fourth intervening meeting, Wednesday evening, January 12, 1887.

Present: Lorenzo Hale, president, and Drs. Ball, Bigelow, Boyd, D. C. Case, Classen, Cook, Lemuel Cross, of Cobleskill, Curtis, Dwyer, T. Featherstonhaugh, Fleischman, Houston, H. Hun, Hull, Keegan, M. J. Lewi, Marselius, Morrill, Morrow, Marsh, P. M. Murphy, Mitchell, Newcomb, Perry, Russell, R. H. Sabin, Townsend, G. L. Ullman, Vander Veer, Van Slyke, Vedder, Ward, Witbeck.

The minutes of the last meeting were read and approved.

Dr. D. W. HOUSTON, of Cohoes, exhibited a

SPECIMEN OF SCIRRHUS OF STOMACH

(Dr. T. S. Parker's patient). Man, aged 55 years. Illness dates back one year. Pain in region of stomach for five months. Three weeks before death had large hemorrhage from stomach and bowels. January 10, was suddenly seized with intense pain in region of stomach and in both testicles, and soon died in a state of collapse. Autopsy showed scirrhous of lesser curvature of stomach, considerable thickening about pyloric orifice, but no stenosis. Cardiac orifice unaffected. A small perforation was the immediate cause of death. This patient had no vomiting through all the course of his illness (due, probably, to non-implication of the orifices). No swelling could be found upon examination during life. Scirrhous was not

diagnosed during his long illness. A small, rough gall-stone was found at the mouth of the gall-bladder.

Question: Why had this man such intense pain in testicles before death?
Dr. P. J. KEEGAN reported a case of

MULTIPLE VESICULAR PURPURA.

[See ALBANY MEDICAL ANNALS, June, 1887.]

Dr. H. HUN saw the case, and regarded it as due to embolic infarctions caused by pneumonia.

Dr. S. A. RUSSELL considered it a typical case of the hemorrhagic sort. He did not think it necessarily due to the pneumonia, as it appears in well and in sick people. The child, moreover was recovering from the pneumonia.

Dr. R. H. SABIN regarded the condition as always caused by debility.

Dr. KEEGAN said that he called it as he did because he did not know how else to term it. He had frequently seen purpura. In one case the eruption was symmetrical over the entire body, with the exception of a line down the center of the nose and chin. In the case reported the vesicles contained blood. The eruption was not caused by any medicine, and the child was convalescing.

Dr. F. C. CURTIS, who was not present during the reading of the paper, by request spoke upon the subject.

Dr. A. VANDER VEER read a paper on "Intubation of the Larynx," with an exhibition of new instruments necessary to the operation, and of the method of their use demonstrated upon the living subject and upon the cadaver. [See page 41.] Opportunity was afforded to all present to introduce the tube into the larynx of the cadaver.

Upon motion of Dr. Franklin Townsend a vote of thanks was tendered Dr. Vander Veer.

The paper was discussed by Drs. Townsend, Russell and Fleischman.
Adjourned.

Fifth intervening meeting, Wednesday evening, January 26, 1887.

Present: Lorenzo Hale, president, and Drs. Babcock, T. P. Bailey, Bigelow, D. C. Case, J. D. Craig, Curtis, Culver, T. Featherstonhaugh, Fleischman, Freeman, Kathan, Keegan, Larkin, Mereness, Morrow, Newcomb, O'Leary, Rulison, Russell, B. U. Steenberg, Thompson, Townsend, Van Allen, Vander Veer, Van Rensselaer, Ward, Woodward.

Minutes of the previous meeting were read and approved.

President Hale announced to the society the death of

DR. JOHN J. WHITE,

and appointed the following committee to draft resolutions: Drs. S. H. Freeman, A. Vander Veer, S. B. Ward, Henry Hun, D. V. O'Leary, B. U. Steenberg and John Thompson. The resolutions were read by Dr. S. H. Freeman, as follows, and unanimously adopted:

The angel of death has again appeared in our midst and summoned a worthy member of this society to his eternal reward.

Dr. John J. White was distinguished for his many virtues, and it is our pleasure to record our appreciation of his character and our loss in his death. Dr. White graduated from the Albany Medical College in the class of '79, in the twenty-second year of his age. He was then appointed resident physician in St. Peter's Hospital, where he faithfully served for three years. He afterwards removed to New York city, where he was soon engaged in a large general practice, and was also medical examiner for several life and health insurance companies. A few months since he returned to his mother's home in this city to recruit his enfeebled health, and seemed almost restored when, from a sudden exposure, in aiding a friend, he was stricken down with pleuro-pneumonia. He was a young man of remarkable integrity of character, possessed of scholarly profes-

sional and literary attainments, and was a genial and warm-hearted companion. Therefore,

Resolved, That in humble submission to the divine will, we mourn the loss the society has sustained in the death of our esteemed friend, Dr. John J. White, and we tender our warmest sympathy to the family so deeply bereaved.

Resolved, That as a mark of respect we will attend the funeral in a body.

S. H. FREEMAN,
A. VANDER VEER,
S. B. WARD,
H. HUN,
D. V. O'LEARY,
B. U. STEENBERG,
J. THOMPSON.

Dr. J. THOMPSON, in moving the adoption of the resolutions, paid a fitting tribute to the worth of the lamented deceased.

Dr. A. VANDER VEER spoke especially of his acquaintance with the deceased while in discharge of his official duties at St. Peter's Hospital. He found him always faithful and courteous, and looked forward with pleasure to his enjoyment of a long, prosperous and successful career of usefulness.

Dr. D. V. O. LEARY said: I desire to offer on this occasion a word of tribute to the memory of our departed friend and member. Dr. White was one of those bright, genial natures to whom we become warmly attached and whom we are always pleased to meet in the affairs of life. He was thoroughly equipped in his profession, honest in all his dealings, and always gentle as a child. During an acquaintance of several years, I never met him that he did not by some happy word or act leave a pleasant recollection. It is sad to think that at the very beginning of what we believed would be a brilliant and useful career death has taken him from our society, but pleasant to know that his life had ever been a preparation for the life to come.

Dr. VANDER VEER proposed a resolution, which was unanimously adopted, that a paper by Dr. Townsend on "Ovulation and Menstruation," read at a former meeting of the society, be presented at the meeting of the State Society next February.

Dr. F. Townsend read a paper entitled

ATRESIA VAGINÆ FOLLOWING LABOR.

It was discussed by Drs. Morrow, Thompson, Vander Veer, Ward and Keegan. [See ALBANY MEDICAL ANNALS, July, 1887.]

Dr. A. VANDER VEER remembered a case at the City Hospital fourteen years ago. The patient, a colored woman, had almost complete atresia since birth of her first child a year previous. The atresia was treated by gradual dilatation and incision, followed by the use of glass and hard-rubber dilators. The patient was made comfortable. Six months after treatment had ceased she became pregnant. She left the city, and had not since been heard from. He had observed in two cases of partial adhesion that adhesions were exceedingly sensitive and that it was difficult to continue the use of the dilators. One case was treated for a long time before relief was obtained.

Dr. S. B. WARD had seen two cases, one of partial atresia, a condition not as dangerous as complete atresia. The case of complete atresia was seen in 1873. The patient was 38 years of age, and was delivered of her first child in Dublin eighteen years before. It was a difficult labor. Instruments were used, and there was considerable laceration. She had never menstruated since. She suffered intense pain at first for two or three days each month, afterwards for six or eight days. The vagina was

entirely closed above, and posteriorly there was a fluctuating mass. The uterus rose above the symphysis pubis, and was as large as at third month of pregnancy. Dr. Thomas advised tapping with the aspirator, which was done through the vagina. Six or eight ounces of a thick, tarry fluid were withdrawn. The uterus contracted to nearly its normal size. The woman was greatly relieved, and had no acute pain at the next menstrual period. The severe pain returned at the end of six or eight months. Dr. Ward then operated, assisted by Dr. Thomas. The operation was the customary one, and the uterus was washed out twice daily. She died of septicæmia on the seventh or eighth day afterward. Dr. Thomas regarded it as one of the most dangerous of operations.

Dr. P. J. KEEGAN said that in the case of the patient of Dr. Townsend the danger of septicæmia was much less than in complete atresia. The upper part of the cavity is so near to the peritoneal cavity as to be an element of danger. In New York he had seen four cases of complete atresia, all traumatic, and one congenital. He spoke of one case that was operated on at the suggestion of Dr. Sims. This case had never shown any symptoms of menstruation, but the uterus was so distended that it could be felt above the umbilicus.

Drs. S. R. Morrow and J. Thompson also took part in the discussion.

Dr. J. M. BIGELOW exhibited a specimen of Diseased Heart.

Owing to the late hour, Dr. Culver postponed the reading of his paper on "Convergence Anomalies" to February 9.

Dr. A. VANDER VEER presented, for Dr. Thomas Beckett, a specimen of Fatty Degeneration of Placenta.

On motion of Dr. Ward, a vote of thanks was tendered Dr. Townsend for his valuable paper.

The society adjourned.

Sixth intervening meeting, Wednesday, February 9, 1887.

Present: Lorenzo Hale, president, and Drs. Bendell, H. S. Case, Cook, J. D. Craig, Culver, Curtis, Dwyer, T. Featherstonhaugh, Fleischman, Hallenbeck, Henry Hun, La Moure, Morrow, Newcomb, Russell, Shattuck, B. U. Steenberg, and T. F. C. Van Allen; also Drs. Babcock, Kathan, Larkin, Lillenthal, and medical students.

Dr. C. M. CULVER read a paper on "Convergence Anomalies." [See ALBANY MEDICAL ANNALS, May, 1887.]

Dr. D. H. Cook was called upon to act as secretary *pro tem*.

Dr. Culver's paper was discussed by Drs. Russell, Bendell, Featherstonhaugh and Culver.

Dr. A. VANDER VEER exhibited various pathological specimens.

Adjourned.

Seventh intervening meeting, Wednesday evening, February 16, 1887.

Present: Lorenzo Hale, president, and Drs. Babcock, Bartlett, Bendell, D. C. Case, H. S. Case, Claassen, Cook, Dwyer, Fleischman, Hallenbeck, Henry Hun, Keegan, La Moure, Morrill, Morrow, R. H. Sabin, Shattuck, Vander Veer, Van Slyke, Ward.

The minutes of the previous meeting were read and adopted.

Dr. R. H. SABIN, of West Troy, read a paper on "Gall-Stones." It was discussed by Drs. Ward, Keegan, Morrow and Vander Veer. [See ALBANY MEDICAL ANNALS, September, 1887.]

Dr. MARTIN J. DWYER reporting a case of Cerebral Lesion.

It was discussed by Drs. H. Hun, S. B. Ward and A. Vander Veer.

TUMOR FOR DIAGNOSIS.

Dr. A. VANDER VEER presented a pathological specimen, with the following history: Mr. C., aged 26, farmer. Two years ago he suffered from pain down the right thigh. He was treated for sciatica for a year. About

a year ago the pain became localized over the sciatic nerve, and in March or April a small tumor became apparent. Dr. Vander Veer saw him in July. There was then great pain, and a tumor could be made out on the lower part of the buttock, resting on the sciatic nerve. Exploration was advised. In the autumn his condition was much worse, but he still refused to submit to an operation. Ten days ago he returned, but his courage failed. Last Saturday he came to the clinic, but again went home without being operated upon. Monday the operation was performed antiseptically. A long incision was made over and down to the sciatic nerve. The tumor rested upon the nerve, and was attached to its sheath. It was removed without injury to the nerve. The wound was in an excellent condition when dressed to-day.

The tumor was referred to the committee on pathology for examination. Adjourned.

Eighth intervening meeting, Wednesday, February 28, 1887.

There were present members of the society, the Albany Institute, of the Dana Natural History Society and others.

Dr. S. B. WARD moved that the regular order of business be suspended. It was carried, and the reading by Dr. T. F. C. Van Allen of a paper on

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was made the business of the evening. Dr. Van Allen explained fifty photo-micrographic views thrown upon a screen by Dr. J. B. Southworth from the stereopticon. [See ALBANY MEDICAL ANNALS, March, 1887.]

On motion of Dr. Ward, seconded by Dr. Vander Veer, a vote of thanks was tendered by the society to Dr. Van Allen.

Mr. W. H. Hale, also seconded the motion on behalf of the Albany Institute, and complimented and thanked Dr. Van Allen.

The society then adjourned.

Ninth intervening meeting, Wednesday evening, March 9, 1887.

Present: Lorenzo Hale, president, and Drs. Babcock, T. P. Bailey, Bartlett, Bigelow, D. C. Case, Cook, Culver, Carroll, DuBois, T. Featherstonhaugh, Fleischman, Houston, H. Hun, Keegan, M. J. Lewi, Mereness, Mitchell, Morrow, Munson, Russell, Shattuck, B. U. Steenberg, Stillman, Thompson, Vander Veer, Ward.

The minutes of the previous meeting were read and approved.

Dr. J. M. BIGELOW exhibited a Rhinolith, and gave the history of the case. Discussed by Dr. Thompson and Dr. Bigelow. [See ALBANY MEDICAL ANNALS, June, 1887.]

Dr. J. H. MITCHELL, of Cohoes, reported

A CASE ILLUSTRATING CEREBRAL LOCALIZATION.

[See ALBANY MEDICAL ANNALS, June, 1887.]

Dr. H. HUN said that this was an interesting case of localized monoplegia. A cerebral cortical lesion was evident. If the patient lost his skill—a cortical function—there naturally would be awkwardness in all his movements. A good test for such cortical lesions was the recognition of objects felt by the hand. They would be felt in such cases, but not recognized, the patient having lost the memory of things felt by that hand, the cortex being the storehouse of memories. The patient had no memory of the thing with which to compare his actual sensation, and hence could not recognize it. He has gradually to recognize things felt. In doing so, he uses mostly the index finger and the thumb—not so much the other fingers; hence function is not so much restored in the other fingers. These cases are not so uncommon.

Dr. Hun saw a somewhat similar case last Monday. About two weeks ago a woman was delivered of a child at the seventh month. There was scarcely any pain during labor, which was very precipitate, but the after-pains were sharp, and there was excessive flooding. The patient became pale and blanched, but she got along well. Two weeks after the child was born she awoke with numbness of the right hand. Two hours afterwards

she could not speak, and the hand and the right side of the face and body were numb. A few hours later speech returned. The numbness partially disappeared, but the arm was awkward. She was ignorant of the position of the arm—had lost the muscular sense. She felt slight touches well, but she did not recognize things placed on the hand. Every thing in the right hand felt smaller. He thought the cause was a cerebral embolus which had passed through the lung to the median cerebral artery. He gave nitroglycerine to dilate the adjoining blood vessels. Last night there was a slight convulsion, two hours afterwards another, and each one commencing in the arm. There was a tendency for the right arm to be thrown about involuntarily. Headache and dizziness were present. The convulsions and involuntary movements were evidently due to cortical irritation caused by the reflex of blood supplied by collateral circulation, acting as an excitant to the cortical cells. Digitalis was administered. She slept well in the afternoon. This morning she felt well. The hand and arm were slightly awkward, but she recognized things placed in the hand.

Dr. Hun exhibited a plate showing the distribution of the cerebral arteries.

Dr. S. A. RUSSELL read a paper entitled "Is Teething a Common Cause of Disorder in Children?" [See ALBANY MEDICAL ANNALS, July, 1887.]

It was discussed by Drs. M. J. Lewi, Ward, Culver, Vander Veer, Mereness, Townsend, Bartlett and Russell.

The society then adjourned.

Tenth intervening meeting, Wednesday evening, March 28, 1887.

Present: Lorenzo Hale, president, and Drs. Babcock, Billings, Bendell, Blair, D. C. Case, J. D. Craig, Curtis, T. Featherstonhaugh, Fleischman, H. Hun, M. J. Lewi, Mitchell, Skillicorn, Stillman, Thompson, Vander Veer and Woodward.

The minutes of the previous meeting were read and approved.

Dr. JOHN THOMPSON read a paper on "Renal Colic," and exhibited some renal calculi. [See ALBANY MEDICAL ANNALS, June, 1887.]

Discussed by Drs. Stillman, Vander Veer, Skillicorn and Thompson.

A communication was read from Dr. Lemuel Cross, of Cobleskill, reporting a case of "Spontaneous Cure of a Hydrocele." [See ALBANY MEDICAL ANNALS, April, 1887.]

Dr. VANDER VEER moved a vote of thanks to Dr. Cross. Carried.

Dr. W. O. STILLMAN read a paper entitled, "Some Practical Points in Domestic Sanitation." [See ALBANY MEDICAL ANNALS, page 296, September, 1887.]

Discussed by Drs. Vander Veer, Bendell, Curtis and Stillman.

Dr. BENDELL moved that to the committee on hygiene and to Dr. Stillman be referred the subject of calling attention of the Board of Health to regulations and instructions to be issued to plumbers. Carried.

Dr. L. E. BLAIR read a paper entitled "An Unusual Case of Fracture of the Skull." [See ALBANY MEDICAL ANNALS, June, 1887.]

Discussed by Drs. Vander Veer, H. Hun, Thompson, Bendell.

Dr. BENDELL moved that the society express their endorsement of the bill to codify the medical laws of the state of New York, now before the legislature. Carried.

The society then adjourned.

Eleventh intervening meeting, Wednesday evening, April 27, 1887.

Present: Lorenzo Hale, president, and Drs. Babcock, T. P. Bailey, Ball, Bartlett, Bendell, Blair, E. E. Brown, D. C. Case, Classen, Curtis, DuBois, T. Featherstonhaugh, Fleischman, Keegan, Morrill, Morrow, Moore, Munson, Marselius, Newcomb, B. U. Steenberg, Russell, Thompson, Van Allen, Vander Veer, Ward, Woodward.

The minutes of the previous meeting were read and adopted.

Dr. S. A. RUSSELL read a paper entitled

CHRISTIAN SCIENCE AND ALLIED METHODS OF HEALING.

Dr. T. FEATHERSTONHAUGH mentioned an instance coming under his own observation where a professor of the science at a certain appointed hour each day would, in his office in New York, exert his healing influence upon a roomful of subjects in Boston.

Dr. A. VANDER VEER believed that but few physicians practiced mainly with an eye to pecuniary profit. It is a question whether the members of any other profession do so much to lessen their own incomes. Every true physician is a teacher of preventive medicine, and daily urges people to take care. As to these methods of cure, similar methods were preached in former ages. These cures are limited to functional derangements. It is somewhat difficult to diagnose hysteria from true organic disease. He mentioned fatal results under the non-interference of Christian scientists, where proper measures would have saved life.

Dr. T. F. C. VAN ALLEN related a story told him by a member of the profession in Albany, who could vouch for its accuracy. A lady lost the vision of both eyes, and was totally blind. Years afterwards one shrunken globe was removed for the relief of severe neuralgic pains, and after this the remaining eye was enucleated for the same reasons by a member of this society. This unfortunate lady recently was persuaded of the efficacy of Christian healing, and after a course of treatment it was reported that Mrs. — was gaining some sight, and was confident she would soon recover her vision.

Drs. Curtis, Bendell, and Fleischman discussed the paper.

Dr. G. S. MUNSON read a paper on "Formation of Bone in the Eye, with the History of an Unusual Case."

It was discussed by Drs. Bendell, T. Featherstonhaugh and Van Allen.

Dr. FLEISCHMAN read a paper entitled "Notes on the Use of Cocaine in Throat Practice, with Cases Illustrating Constitutional Effects from Local Applications."

Dr. VANDER VEER inquired as to the strength of solutions. He had used cocaine, to an extent, in minor surgical operations, and was surprised at the strength of solutions mentioned in the paper. In an operation for phimosis, on an adult, he had injected fifteen to twenty drops of a ten per cent. solution at three different points. There was no pain during the operation, but there followed sloughing at each point touched by the cocaine.

Dr. WARD had used cocaine considerably, and had had a number of cases where constitutional effects had followed local applications, principally followed by weakness of the heart's action.

Dr. BENDELL performed most of his operations upon the eye with the aid of cocaine. He had performed enucleation without any pain, using injections of an eight per cent. solution. He had found that when in the pharynx cocaine was not effective, spraying or brushing with a very weak solution of atropia made it so.

Dr. BLAIR had found that the action of cocaine was more powerful on the nasal than on other mucous membranes, and referred to its diagnostic action in determining true hypertrophy.

Dr. MUNSON mentioned a painful eruption appearing upon the lips after the use of the drug in an operation on the nose.

The society then adjourned.

The semi-annual meeting was held in Alumni Hall, Tuesday, May 10, at 8 o'clock P. M.

Present: Lorenzo Hale, president, and Drs. Babcock, T. P. Bailey, Ball, Bartlett, Bigelow, R. J. Brown, Case, Cook, J. D. Craig, Curtis, Dwyer, Fleischman, Freeman, Greene, Hennessy, H. Hun, M. J. Lewi, Morrow,

Moore, W. J. Nellis, Russell, R. H. Sabin, W. B. Sabin, Steenberg, Thompson, Townsend, Van Allen, Ward, Woodward.

The minutes of the last annual meeting were read and approved.

Dr. T. F. C. VAN ALLEN, from the committee on registration, reported as follows:

As chairman of the committee on registration, I would offer the following report on examination of county register. The entries given are from the month of November, 1886, until this date:

November 17, 1886, James P. Marsh, Green Island, N. Y., Albany Medical College, 1885; November 18, 1886, James H. Ward, Cohoes, Victoria Medical College, Montreal, Can.; December 6, 1886, Luman B. Rulison, Albany, N. Y., Albany Medical College; December 8, 1886, W. H. Lemrow, Green Island, N. Y., Albany Medical College; January 4, 1887, Rebecca L. Smith, Albany, N. Y., New York Hygeio-Therapeutic College. No date, but following on entry of January, 1887: John W. Stille, Morris, Otsego Co., N. Y., University of Buffalo; February 26, 1887, Charles Burquet or Burguet, Albany, N. Y., diploma from Faculte de Paris, France; Owen F. McAvenue, Albany, N. Y., Albany Medical College; March 21, 1887, Frank W. Van Alstyne, West Troy, N. Y., New York Homœopathic Medical College; April 7, 1887, Peter G. Cotter, Albany, N. Y., Albany Medical College; no date, but probably April, 1887, R. P. Dewey, M.D., Stanwix Hall, Albany, N. Y., Eclectic Medical College of Pennsylvania—not a very creditable graduate, judging from his penmanship and orthography. He mentions the fact that he was "diplemated" by the above mentioned college. Am told advertisements of the marvelous cures he has performed have been noticed in city papers; April 18, 1887, John V. Sheppy, Albany, N. Y., Jefferson Medical College; April 19, 1887, Henry F. C. Mueller, Rensselaerville, N. Y., Albany Medical College; April 19, 1887, M. Francis Drury, Albany, N. Y., Albany Medical College; April 21, 1887, Elmore E. Elliott, Coeymans, N. Y., Bellevue Medical College; May 1, 1887, Charles H. Moore, Albany, N. Y., Albany Medical College.

It would seemingly be an excellent requirement that the date of the diploma be registered. No action of any kind has been taken regarding irregular practice; none has been reported. Any knowledge of such irregularity should be communicated to the committee by members of the society possessed of such information. Not having had opportunity of conferring with the members of the committee, this report may need their approval and additions.

The treasurer, Dr. Russell, made his report, and introduced a resolution that a committee of three, including the treasurer, be appointed to adjust accounts in dispute and effect settlements. The resolution was adopted, and the president appointed Drs. Russell, Cook and B. U. Steenberg.

The subject was discussed by Drs. Sabin, Cook, Bigelow, Freeman, Russell and M. J. Lewi.

Dr. CURTIS explained the object and workings of the Physicians' Mutual Aid Association.

The semi-annual address was delivered by the vice-president, S. R. Morrow. His subject was "Remarks on Intestinal Obstruction."

Dr. BIGELOW moved a vote of thanks to Dr. Morrow; also that the address be published in the ALBANY MEDICAL ANNALS [see page 297], and that it be made the order of business for discussion at a future meeting. Carried.

Dr. RUSSELL exhibited the apparatus used in Bergeon's method of treating phthisis by gaseous enemata.

Dr. R. H. SABIN reported an unusual case of hysteria, which was discussed by Dr. H. Hun.

The society then adjourned.

An extra meeting was held in Alumni Hall, Wednesday evening, September 28, 1887, at 8.30 P. M.

The president, vice-president and secretary and a large audience were present.

The president called the society to order, and said that the object of this extra meeting was to afford the members the pleasure of listening to a lecture entitled "A Scientific Demonstration of Mechanical Massage, Illustrated," by Mr. Edwin Turner Osbaldistone, of 721 Sixth avenue, New York city, who was then introduced to the society. After the lecture, on motion of Dr. S. B. Ward, a vote of thanks was given to Mr. Osbaldistone.

The annual meeting was held in Alumni Hall, Tuesday, October 11, 1887, at 8 o'clock P. M.

There were present: President Lorenzo Hale and Drs. Babcock, T. P. Bailey, Balch, Ball, Barker, Bartlett, Bendell, Bigelow, Blair, Boyd, D. C. Case, H. S. Case, Clark, Cook, Cooper, J. D. Craig, W. H. Craig, Crawford, Culver, Curtis, DuBois, Dwyer, J. D. Featherstonhaugh, Fleischman, Fowler, Freeman, Hennessy, Houston, Huested, H. Hun, Keegan, La-Moure, Maurice J. Lewi, Marselius, J. P. Marsh, Mereness, Merrill, Mitchell, Morrow, Murray, T. W. Nellis, W. J. Nellis, Newcomb, Papen, Russell, R. H. Sabin, Shattuck, Sheppey, B. U. Steenberg, Thompson, Townsend, Tucker, Van Allen, Vander Veer, Van Slyke, Ward, Winne, Woodward.

The minutes of the semi-annual meeting were read and approved.

The censors reported the following applicants for membership: Julius B. Southworth, of Albany, graduate of the University of Vermont, 1882; John Van Derwater Sheppey, of Albany, graduate of the Jefferson Medical College, 1885; James P. Marsh, Green Island, graduate of the Albany Medical College, 1885; Robert Babcock, of Albany, graduate of Albany Medical College, 1884.

Report accepted. The applicants for membership were subsequently elected.

The treasurer, Dr. S. A. Russell, read the following report for the year ending October 11, 1887:

Received cash from Dr. La Moure, treasurer, as follows: For dues, etc., \$41.18; for initiation fees, \$30; from dues and arrearages from October, 1886 to October, 1887, \$209. Expenditures for printing, postal cards, advertising, etc., \$34.88. Cash in treasury, \$195.30.

After discussion, the chair appointed Drs. D. H. Cook, J. D. Featherstonhaugh and J. H. Mitchell a committee to examine the treasurer's accounts.

Dr. BARTLETT, chairman of the committee on hygiene and the relations of the profession to the public, read their report. On motion of Dr. Freeman the report was accepted.

Dr. TUCKER moved the adoption of the resolution as to reporting cases of typhoid fever. Carried.

In reply to Dr. Cook, who expressed a desire for a more effective action on the part of the board of health in cases that are reported, Dr. Vander Veer said the board of health was, to an extent, crippled for funds, but that a great amount of work was done by the board in the abatement of nuisances, the removal of dead animals, the inspection of drainage, and in the investigation of cases of contagious disease. Physicians should be willing to report such cases promptly, and they will be soon supplied with printed postal cards, which will only require to be dropped in the nearest postal box.

Dr. VANDER VEER asked Dr. Bartlett to what cause he attributed the great mortality from consumption in Albany.

Dr. BARTLETT answered that although it could be partly attributed to consumptives from the rural districts coming to the city, the chief causes were overcrowding in certain sections, the periodical flooding of the districts along the river and the emptying of the city's drainage into the Hud-

son. Dr. Bartlett had personally observed during the last six months that the health board accomplished a great amount of work, not the least of which was in the direction of household sanitation.

Dr. COOK, from the committee appointed to inspect the treasurer's books, announced their approval of the treasurer's report, and, on motion of Dr. Townsend, the report was accepted and a vote of thanks tendered the treasurer.

Dr. FREEMAN read the following report:

The committee on decorations, including paintings or photographs of members of this society, respectfully report that some contributions have been added to the collection since their last report, and more have been partially promised. It is so much easier for members of the society to contribute his own photographs than to leave it to be done by others; that the committee again request each member to contribute his own likeness in any form most satisfactory to himself. The committee have the honor to present at this time an excellent portrait, by Twitchell, of a former president of this society—one who always took an active interest in its welfare, and one whom most of the members will recognize as their personal friend—Dr. James S. Bailey.

On motion of Dr. R. H. Sabin, the report and the portrait were accepted, and the secretary was directed to tender the thanks of the society to the donor.

Dr. S. H. FREEMAN suggested that some of the surplus in the treasury be utilized to furnish medical journals to be used for the benefit of the society, and moved that fifty dollars be expended for that purpose.

Dr. VANDER VEER considered it a move in the right direction, but thought that more consideration should be given to the subject. There is a good nucleus for a medical library in the exchanges of the ANNALS. Dr. Vander Veer moved that a committee of three, with Dr. Freeman as chairman, be appointed to report upon this subject at the next intervening meeting. Carried.

The president appointed as such committee Drs. S. H. Freeman, C. M. Culver and Henry Hun.

The president delivered the annual address, Vice-President Morrow in the chair, as follows:

The earth by cycles wheels around;
Her whirling once more is found
Just past the autumnal equinox,
And we have borne the wear and shocks
Of one more year of current time.
Two members, cut off in their prime
By sudden death, meet not our sight;—
John E. Hall and John J. White,
Unconscious, they come not again;
But we may hope to meet them, when
The coming Christ wakes up the just
Who sleep in darkness and in dust.

We've had eleven business meetings;
Let no one say that in our greetings
We "first shake hands before we box,
Then give each other plaguey knocks."
Twenty two papers have been read;
Much wise discussion has been said;
Besides, at every meeting, we
Had new exhibits in pathology,
Excepting once; and 't was lamented
That such, when present, were not presented
That evening when the diatom photos
Filled time and mind until the close.

Many committees have been made,
 That more attention may be paid
 To special branches. A review
 Each year of matters old and new,
 By each committee in its field,
 Might profit in our meetings yield.
 If for each topic there is fixed a date,
 Committees then no more would have to wait
 In modesty the action of each other,
 But each in its set time proceed in order.

And yet, without much intervention
 Of such machinery, our attention
 Has, by our readers, been directed
 To the times' live topics, vivisected
 By mental keenness and by crucial test.
 The subjects, in their order, may be thus expressed:

Drs. Steenberg and Bartlett started with an agitation
 About "Diphtheria, and City Sanitation."
 Dr. Munson followed with a "Cold Application."
 Second and third meetings, Dr. Hun, "Cerebral Localization;"
 Dr. Mitchell, "Erysipelas and Mortification."
 Fourth meeting, Dr. Keegan, "Purpuric Maculation;"
 Dr. A. Vander Veer, "Laryngeal Intubation;"
 On patient and on cadaver we could practice demonstration.
 Fifth meeting, Dr. Townsend, "Cicatrix Dilatation."
 Sixth meeting, Dr. Culver, "Ocular Perturbation."
 Seventh meeting, Dr. R. H. Sabin, "Bile Precipitation,"
 And Dr. Dwyer, "A Cerebral Illustration."
 Eighth meeting, just half through our list, a culmination,
 By Dr. Van Allen, on "The Brilliant Diatom,"
 With Dr. Southworth's stereopticon.
 Ninth meeting, twelfth paper, Dr. Bigelow, "Rhinolith Formation,"
 And a case by Dr. Mitchell of "Cerebral Localization;"
 Dr. Russell, "Teething and Young Mothers' Trepidation."
 Tenth meeting, Dr. Thompson, "Renal Excruciation;"
 Dr. Stillman, "Domestic Sanitation;"
 Dr. Blair, "A Question of Cranial Localization."
 Eleventh meeting, Dr. Russell on "Cures by Imagination;"
 Dr. Munson, "Ocular Ossification;"
 Dr. Fleischman, "Cases of Cocainization."
 Semi-annual meeting, Vice-President Morrow's oration,
 On surgical treatment of "Intestinal Invagination;"
 And Dr. Russell on "Gaseous Insufflation."
 Later, our extra meeting, Osbaldistone's manipulation.

Within the year we heard by way of Washington,
 From the American Surgical Association,
 Of a remarkable series of "Operations for Stone,
 Forty one Cases," which our Dr. Vander Veer has done;
 And from the Association of American Physicians
 We heard of "Sewer-Gas Poisoning," by the younger of our Huns.

Outside our society's bounds
 There is much that deserves our attention
 In the progress of medical science.
 Especially worthy of mention
 Are the disputes on ptomaines and germs,
 And the *fons et origo mali*.
 Conflicting opinions are heard,
 And new statements almost daily.

Koch found the comma bacillus;
 Klein and Strauss said it don't cause cholera,
 Is not present at first in disease,
 But it comes in its train as a follower.
 Klein has shown a straight bacillus
 Quite constant in cholera cases,
 One-sixth the size of the comma;
 And claims there is really a basis
 (Like Deneke, Kern, Emmerich, Pettikoffer
 And others with plea energetic)
 To doubt that the comma bacillus
 Can claim to be pathogenetic;
 And a cholera fungus, suddenly
 Found by the British Commission,
 Would subvert all predecessors
 With a general demolition.
 Still, we've heard a man of high repute,
 Grant-Bey, of Egypt, tell us
 That cholera plainly does depend
 On the growth of Koch's bacillus.
 Meantime, Ferran inoculates,
 And we all despise his endeavor,
 Until Shakespeare of Philadelphia, tells us
 That results prove the process is clever.

In diphtheria, no champion now
 Defends the micrococcus;
 Will Klebs' bacillus of diphtheria
 Yet be found to mock us?
 Hallier removed the virus
 By rinsing the bacteria;
 And Loeffler and others make the claim
 That not to microbes of diphtheria
 Is the evil due directly,
 But to their ptomaine.
 Meantime, our Jacobi cures
 Diphtheria with papain.

Pasteur's cure for rabies
 Meets with British approbation,
 Though Spitzka says Pasteur
 Has had no true investigation.
 Freire's inoculations
 For yellow fever do so well
 That our government has sent
 George M. Sternberg to Brazil.
 Eberth's bacillus of typhoid,
 Koch's of tuberculosis,
 Are believed in now by all
 As a means of diagnosis.
 But when can we inoculate
 In these and all zymoses?
 And there are other questions
 Which this year all minds oppress:—
 "Is iodoform antiseptic?"
 "What's the value of H₂S?"

While knowledge doth increase,
 Yet, from all its wide domain,
 Science "reports progress,"
 But asks leave to sit again.

On motion of Dr. Freeman, the thanks of the society were tendered to President Hale, and a copy was requested for publication.

Dr. BENDELL moved that two nominating committees of five each be appointed, but that nominations from members on the floor be not barred. He made this motion simply because at former elections there had been some dissatisfaction on account of alleged "machine" work. Dr. Keegan seconded the motion. Dr. Morrow moved as an amendment that an informal ballot for each office be first taken, and then proceed as usual. It was seconded and carried 39 to 8. Motion as amended was carried.

On motion of Dr. Tucker, the president appointed the following tellers: Drs. L. B. Winne, J. D. Craig and T. F. C. Van Allen.

Dr. TUCKER nominated for president Dr. Franklin Townsend, Jr.

The result of the ballot was: Dr. Townsend, 46; Dr. Merrill, 2; Dr. Boyd, 2; Dr. T. P. Bailey, 1; Dr. H. Hun, 1; Dr. Whitbeck, 1.

On motion of Dr. Freeman, the secretary cast one ballot on behalf of the society for Dr. F. Townsend, Jr., for president.

Dr. BENDELL nominated Dr. Mitchell, of Cohoes, for vice-president. The ballot resulted: Dr. Mitchell, 29; Dr. Bartlett, 4; Dr. T. P. Bailey, 8; Dr. Keegan, 2; Drs. Ball, Mereness, Barker, Featherstonhaugh, Clark, Cook, each 1; blank, 2.

On motion of Dr. Curtis, the election of Dr. Mitchell was made unanimous, and the secretary cast one ballot for the society for Dr. Mitchell for vice-president.

Dr. Culver and Dr. T. F. C. Van Allen were put in nomination for secretary.

The first ballot resulted: Dr. Culver, 80; Dr. Van Allen, 19; blank, 1.

The second ballot, Dr. Van Allen, 24; Dr. Culver, 28.

On motion of Dr. Cook, the election of Dr. Van Allen was made unanimous, and the secretary cast one ballot for Van Allen for secretary.

For treasurer, Dr. Russell received 83 votes; Dr. Vander Veer, 2; Dr. Babcock, 2; blank, 1.

The secretary was directed to cast one ballot for the society for Dr. Russell for treasurer.

For censors, Dr. M. J. Lewi nominated Dr. Houston; Dr. W. J. Nellis nominated Dr. Dwyer; Dr. Cook nominated Drs. Mereness and Shattuck, and Dr. Curtis nominated Drs. Hun, Featherstonhaugh, Merrill, T. P. Bailey and Culver. Dr. Featherstonhaugh withdrew in favor of Dr. Houston.

The following received the highest number of votes: Dr. Culver, 20; Dr. Dwyer, 17; Dr. T. P. Bailey, 12; Dr. Houston, 12; Dr. H. Hun, 11.

On motion of Dr. Merrill, this election was made unanimous, and the secretary was directed to cast one ballot for the above named persons.

Dr. BENDELL inquired if there was not a vacancy in the delegates from the society to the State Society, since he, having been made a permanent member, was no longer a delegate.

Dr. CLARK moved to lay the subject on the table until the next monthly meeting. Dr. M. J. Lewi seconded. Motion was lost.

Dr. WARD made a motion, which he afterwards modified, to the effect that Dr. Bendell be requested to resign as delegate, in consequence of having been elected a permanent member.

Dr. BENDELL maintained that there were at present but three delegates; that he was no longer a delegate, and consequently could not resign.

Dr. M. J. LEWI did not believe that a delegate ceases to be such until his successor is regularly elected.

Dr. CURTIS called for the ruling of the chair on this point.

The president believed that a delegate who becomes a permanent member ceases to be a delegate.

Dr. VANDER VEER moved that, in view of the fact that the period of service has been changed to two years, the matter be laid over for one year. The motion was seconded and carried.

After a vote of thanks was tendered to the officers of the past year, the society adjourned.

D. FLEISCHMAN, *Secretary*.

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MATERIA MEDICA; ITS IMPORTANCE TO PHARMACISTS.¹

BY A. B. HUESTED, M.D., PH.G., ALBANY,
Professor of Botany and Materia Medica, Albany College of Pharmacy.

Gentlemen—We, this evening, enter upon the seventh course of lectures in the Albany College of Pharmacy. On behalf of the trustees and faculty I commend to you a hearty welcome, and express the hope that our intercourse may be mutually pleasant and agreeable. Our surroundings, thanks to the Albany Medical College, have been improved, so that we may hope to bid defiance to cold and enjoy the comforts a warm room always gives on cold winter evenings.

Over fifty years since, a college of pharmacy was established in the city of New York, being the first in the state. From that time till 1881, when the Department of Pharmacy of Union University was created and the Albany College of Pharmacy established, the New York college apparently filled all the demands for work in this line. For many years its existence was very precarious. The support it received from students was limited, and not until about the close of the civil war, in 1865, did it give promise of more extended work. Since that time, however, a complete measure of success has been awarded to it, if the num-

¹ Introductory Address, Albany College of Pharmacy, Monday evening, October, 8, 1887.

ber of students is a fair criterion to judge by, and let us hope that this success may attend it in the future, and that it may continue to merit it. A great state like New York, the Empire State, with more than 5,000,000 of people, over 10,000 of whom are engaged in the business of preparing and dispensing medicines, surely needed more than one school to educate its apothecaries. This is what was thought when this college was opened, and the wisdom of this move has been demonstrated during the past six years. From an attendance of eighteen students at the opening course of lectures here, the number has gradually increased to fifty-two students during the last course. Sixty young men and one woman have been sent forth with diplomas, testifying to the excellence attained in the science and art of pharmacy. The position, work and standing of these graduates has proved that the labor has not been in vain. Let us see to it, each and every one, that the past be not marred, and that the future be an assured and continued success.

In the past three or four years others have been impressed with the idea that there was yet room in the Empire State for still more colleges of pharmacy, and our friends in the extreme western borders in 1886 opened the Buffalo College of Pharmacy; and again this year comes the announcement of a department of pharmacy from Cornell University, and the doors of education for the student in the mysteries and art of compounding and dispensing (shall we say nauseous and repulsive, or elegant and enticing?) compounds, to cure the ills and mishaps of mankind, are to be opened. All four of these institutions will not more than supply the demand which should be made for them in this age of increased education and labor. To one choosing which institution of learning to patronize, varying elements enter into consideration. Not always is the largest and most numerously attended school or college the best, and aside from the school itself there are other factors, such as locality and ability to obtain the wherewithal necessary to bear the expense of the course, entering into consideration.

These latter should, perhaps, be least considered, the main point being where and how to obtain the best education for the purpose desired. All will not attain the fame of a Black, a Cavenish or a Scheele, or even become Squibbs, because all are not willing to devote the hours, days, weeks, and even years of labor and toil to the work, and yet such fame cannot be secured but

by hours, weeks and years of toil and labor. All cannot attain fame, because all are not alike endowed with powers capable of achieving the greatest success. Advance can, however, be secured by all, and to him who most deserves it by his untiring and steady work, will it be meted out in greatest measure. The college which makes plain the ground-work, teaches plainly and understandingly the fundamental principles underlying and controlling the work of the pharmacist, is the one which should be sought for and deserves the greatest success. When any work is to be done, the first thought is towards preparation for it, and when the preparations are complete, then can the work be easily accomplished.

The measure of success does not, however, lie wholly with a teacher, a school or a college. Many students have far outrun their teachers. All schools have graduated those who have achieved fame and success and those who have made failures. All colleges grant diplomas to those who afterward become known to the world by their work and to those who attain their greatest notoriety on the day of graduation. This is due not alone to difference in ability in individuals, but mainly to difference in the amount of labor put forth for the ends sought; and, as a rule, he who puts forth the greatest effort is the one who has the greatest success.

It is to be supposed that you have come here with the expectation of receiving some benefit, also that you have determined within yourselves the business you prefer to follow through life, and that you have also had some years of practical experience in it. With such convictions and preparation, and a judicious use of your time while here, but one result can follow—that is, the accomplishment of the purpose in view.

The method of instruction is by lectures, and the student should, by means of proper books, make himself thoroughly conversant with the subjects lectured upon. In physics, chemistry, pharmacy, and even botany, there is something to interest the mind, attract the attention and start a desire for investigation. Certain laws govern these sciences, and when once understood are easily remembered and quickly applied when occasion requires. Often students are heard to remark, "Chemistry, I like, there is something to that;" or, "Botany is attractive; I now look upon plants with a different eye; they are almost like human beings." So with philosophy and pharmacy. On the

other hand, the remark is often heard, "Materia medica! It's a dry, hard subject—so much to remember, nothing to help remember it, either." These remarks may all be very true, but the fact, nevertheless, remains that materia medica is a very important branch of pharmacy, if not the most important, and perhaps it is not saying too much if I say that in proportion to the success achieved in this department, just in the same proportion does your success in your future calling depend. It may certainly be said to be the oldest, and in its full sense the broadest, department of a pharmaceutical education. The subjects of which materia medica treats, existed and were used and studied long before chemistry, philosophy, pharmacy and botany were thought of. Literally it signifies medicinal materials or agents. In its broadest sense it includes a knowledge of all agents used for the cure of disease and the healing of wounds. At the present day so numerous are the agents used as medicines that a lifetime would hardly suffice to obtain a complete understanding of all. Such a task may well be considered incapable of accomplishment, and it is not required. Though there is hardly an agent or substance in the world but is now or has been used as a medicine, time and experience have selected a few which are of undoubted value. This process of selection began when man first appeared upon the earth, and has continued from that time to the present. Many of the most valuable and common medicines have been known and used from remote periods. Gum Arabic was known and used in the arts by the Egyptians in the seventeenth century B. C., also by the Greeks in the third century B. C., and by them probably used as a medicinal agent. The physicians of Arabia and Salerno, in Italy, during the eleventh century A. D., employed it in medicine, and at a much later period its use in Europe became general.

Aconite was known as an arrow poison by most of the ancients. The Greeks and Romans were acquainted with its poisonous properties, but it was not until the thirteenth century that it was much used as a medicine, and did not come into general practice till the eighteenth century.

Aloes was known to the Greeks as a valuable medicine, coming from the island of Socotra, in the fourth century B. C., and has been recognized as a valuable agent by all physicians of our era. From the first, good and bad aloes was distinguished the same as it is to-day.

Assafœtida—probably known and used as a medicine from the beginning of our era, certainly by the physicians of the middle ages, and from that time to the present.

Belladonna, an agent of much value, is of more recent date as a medicine. Its use does not seem to extend back farther than the fourteenth or fifteenth century A. D.

Columbo, known and used by the natives of Eastern Africa, from whence it is derived, was in the eighteenth century introduced into European practice.

Camphor, coming from China, Japan and the Islands of the Indian Ocean, first valued as a perfume and later as a medicine, is an almost indispensable article in all civilized countries.

Castor oil, known for many centuries before the Christian era, used in the arts and probably as a medicine, still retains its place in *materia medica*.

Cubebs—first used as a spice, as a medicine by the physicians of Arabia in the twelfth century, and from that time with varying periods of popularity and neglect to the present, now holding a permanent position as a medicine.

Gentian is another medicine of the former era which now holds a permanent place in all pharmacopœias.

Conium, variously known as *cicuta* and *hemlock*, has descended to us from the ancients by whom it was used both as a poison and medicine, has had its periods of popularity and neglect, until now it seems everywhere admitted and used.

Hyoscyamus, *opium*, *rhubarb*, *scammony*, *squill*, *valerian*, *veratrum* and *ginger* of to-day, *opium* especially so, have descended to us from the ancients, while *cinchona*, *digitalis*, *ipœcac*, *jalap*, *nux vomica*, *ergot*, *senna* and *stramonium* are agents which have come into use during the past three or four hundred years. All of these articles occupy important places with respect to the well-being of civilized humanity, are in every-day demand from pharmacists, and should be most thoroughly understood.

The list of these more common and valuable articles is not so large, and expositions of them so numerous and easily accessible, that it is within the reach of all to have a thorough knowledge of them. All these articles are derived from the vegetable kingdom, this naturally affording them first. Few and comparatively non-important are the medicines derived from the animal kingdom. This is very natural and to be expected, the

animal kingdom being of a higher order and dependent entirely upon vegetable life for its life. As the secrets of nature became unlocked by the foundation and advancement of chemical science, a new class of medicines began to be introduced.

Basil Valentine, in the fourteenth century, and later Paracelsus, advocated and used chemical medicines, and from that time to the present their use has extended and increased. From this source, as from the vegetable kingdom, the list of important remedies is not so great, but a thorough knowledge of them can be had.

Materia medica, as before stated, is a very important subject, including as it does substances from every one of the three great kingdoms of nature, and may be said to be taught in all the departments of a college of pharmacy. The *materia medica* of chemicals and of compounds coming under the departments of chemistry and pharmacy, while in the department of *materia medica* proper, only such agents as are derived from the vegetable and animal kingdoms are treated of.

The method of studying *materia medica* in a college of pharmacy is and of necessity should be different from the course pursued in colleges of medicine. The physician aims to know the exact effect a substance has upon the human system, the dose necessary to produce that effect, and the dose which would be dangerous. Medicinal agents are the tools with which the physician works. He should know just how and when to use them, and just what he can do with them.

The pharmacist, on the other hand, does not require all this knowledge; he should know what is the safe dose, and what its general effect, solely for the purpose of correcting errors which might creep into his orders. What he should know thoroughly is the identity of an article in whatever form it may be presented, and also be a thorough judge of quality. It is his province to prepare and furnish the tools with which the physician works, and he should be positive that they are just what are required and capable of doing the work assigned to them. In order to do this, a thorough knowledge of the crude material, whether of animal or vegetable origin, is essential. This can only be had by actual handling and thorough study of the material, not one sample, but as many and as often as possible. Different years' growth of the same kind of plants may present different appearances, the climate, soil, locality in which grown,

and state of maturity often vary the appearance greatly. The substitution of one article for another, either wilfully or through ignorance, does occur; sometimes two articles are similar in appearance, and the characteristic differences should be fully understood. The senses of sight, taste and smell are valuable aids when fully cultivated to the identification of crude medicines; every opportunity for cultivating them should be made use of. The study of vegetable materia medica should be pursued, as we have said, by personal examination of the substances, exercising fully the senses of sight, taste and smell. A small magnifying glass will be found to be of great aid in this work, as it enables the student to appreciate the individual structure, color, and so forth, of each substance more fully than can be done by the eye alone. Hardly any two vegetable substances have the same arrangement of tissues, each one generally having its own characteristic structure. Substances examined in this way, comparing them with the text of the work you are reading, will give such a complete conception of the article as will enable you to recognize and give intelligent descriptions of them.

Chemistry enables you to identify and ascertain quality in chemical medicines, and you should have some means of doing the same with crude drugs.

The proper care necessary for the preservation of these agents is another point in which education is required; the length of time they can be kept without impairment, their preservation from insects and worms. This includes a consideration of temperature, of light, of contact with or deprivation of air, and the use of agents to prevent the ravages of animals. The condition necessary for their preservation does not vary with each agent; all may be divided into a few classes, each class being subjected to the same treatment. The preservation of crude drugs is a subject of more importance than is often appreciated, judging from the attention paid to it. In the care of chemical agents attention is necessarily devoted to their preservation, because changes with them are readily seen. Changes with vegetable agents are not, however, so readily shown to the sense of sight, and may from improper care or too long keeping become worthless as medicinal agents, and yet in appearance show but little change.

Most, if not all, vegetable substances contain certain principles called active principles, upon which their property depends.

A knowledge of this fact and of the principle is necessary as a demonstration of its presence or absence, and the amount is often the only means by which to judge of quality.

A knowledge of all the constituents found in a substance is of service, for aside from the active principle or valuable constituent there may be others which are not only inert but troublesome and injurious when combinations are to be made. These, then, are the important points to the pharmacist in the study of *materia medica*, and they are of greatest value in this order: First, identity; second, quality; third, care or preservation; fourth, constituents; fifth, dose; sixth, property.

Origin, natural order, habitat and history are of not so much moment, certainly not to the exclusion of any one of the preceding. Of these the origin is the most important, for it gives the full name of the plant or animal from which the substance is derived, and serves to point to a definite source.

For example, *calumba*, its origin, is *jateorrhiza calumba*. That is, the medicinal agent *calumba* is the root of a plant, the botanical or scientific name of which is *jateorrhiza calumba*. The natural order of *calumba* is *menispermaceæ*, this being the name of the order or family to which, in a botanical classification, the plant furnishing *calumba* belongs. Habitat is simply the name of the country or locality in which the plant grows, being in the case of our example Eastern Africa. History furnishes a complete record of the medicine from its first introduction.

A knowledge of natural orders is useful, as often certain properties run through nearly all or many plants in an order. The habitat and history of a drug or medicine is necessary only for a full and rounded education. To a thorough student of *materia medica*, enough of origin, natural order, habitat and history will stick to him for all ordinary purposes.

If *materia medica*, as viewed by the true pharmacist, was more thoroughly and generally understood than it is, there would be much less talk of adulterated and inert medicines; less opportunity to dispose of poor and spurious articles; and it would be more essential with larger dealers to keep only the good and genuine.

I am well aware that at the present time there are those who entirely ignore a knowledge of crude drugs, say they have no use for it, do not handle them, or only the very common ones, and then in very limited quantities. Such persons cannot recog-

nize a piece of rhubarb, columbo, valerian, gentian or squill, let alone less common drugs, or distinguish between such as are similar in appearance, when seen outside of a drawer or jar bearing a label. When they purchase, they take what is delivered without investigation. Tinctures are made from fluid extracts; the most common and easily made chemicals are purchased; no time is wasted in examination of the stock; it is purchased for such and such articles, and must be sold for the same. Surprising as it may seem, such preparation for the drug business and such practices as these are facts to-day, as has been abundantly proved to me in the last three years.

There are some reasons at the present day, I admit, for the neglect of a thorough education as a pharmacist, and especially an education in crude drugs. These are to be found in the competition in business, the scant remuneration returned to the pharmacist who pays more attention to the identity and purity of his commodities than he does to making a show of them, proclaiming their low price and pretending to more knowledge than he is justified in. The educated pharmacist will, in the long run, wear the best, stand the best in the community where he lives, and reap eventually the greatest honor and reward. As well might the *ricinus communis* (castor oil plant) attempt to compete in this latitude for size and durability with the oak as for the uneducated pharmacist with the educated. The *ricinus communis* in this latitude is an annual, generally about four feet high, sometimes attains a height of ten feet in its single year of life, and thereby makes a great show compared with the limited growth of the oak for the first year, but on the approach of cold and storms it perishes, while the oak lives on and increases in size from year to year. In tropical countries the castor oil plant lives from year to year, and becomes a tree forty feet in height. So in some other locality the uneducated pharmacist may flourish from year to year and become prosperous, but not in this locality of enlightenment and education.

Another reason, or cause rather, of want of familiarity with crude drugs is the fact that they are not used as much now as formerly, fluid extracts having replaced them, and also that active principles are in many cases used, almost to the exclusion of the crude material. Then, too, fluid extracts and active principles, especially the former, are prepared, in many cases, I admit, of a reliable and standard quality, so that he who

prefers, need have but little to do with the crude article. The purchase of preparations of crude drugs, however, is a waste of capital, greater in proportion than the saving of time their manufacture would consume; and then, again, such a course might answer under ordinary circumstances, but will not under all. The public and the physician expect the pharmacist to be able to give full information regarding the substances he deals in, and when it is found that he cannot, a loss of confidence and patronage is the result.

A knowledge of crude drugs is essential, not so much for the detection of adulterations as for ascertaining quality. I would not have you infer that adulterations and substitutions are not to be found, because such is occasionally the fact, though in a much less degree than is popularly supposed. The frequent examination of crude and prepared drugs shows there is oftener a lack of quality than substitution, thereby showing not so much dishonesty as lack of ability to judge quality. To my mind, at the present day the most important point in the education of a pharmacist is—can he estimate the quality of the materials he deals in? It is not sufficient that he knows this to be rhubarb, that aloes, or something else serpentaria, but are they of standard quality?—do they possess the qualities they should have to make them acceptable as medicines? In the selection of material for use in the arts and manufacture, quality is the most important point considered. Not only is this so in the more important structures, as bridges, cars, boats, intended for the safe conveyance of human freight, but even in less important things, the use of which does not involve the question of life. The engineer who constructs a bridge of material deficient in strength justly receives and merits the condemnation of his fellow-men. How much more important is it that the pharmacist should be able to judge of the quality of the materials he deals in, because here human comfort, often life, is always in question.

The impression, if such you have, that *materia medica* is an unimportant branch, should be cast aside, and an earnest start made for a thorough pursuit of it. Do this by taking advantage of every opportunity possible. Nothing tends to fix in the memory the appearance, taste and smell of a drug so much as working with it. Have you a tincture, extract or syrup to prepare, take the crude drug wanted, compare it with the pharma-

copial description, try the tests, if any are given for quality, and when assured on these points proceed with its grinding, sifting, moistening and packing if percolation is directed, being careful to observe faithfully the directions given for every step of the process. While the percolation is proceeding, read carefully the article on the drug in question in the U. S. or Nat. Dispensatory. By following some such course, if only for a portion of your apprenticeship, you learn not only to recognize and estimate quality, fix dose and property, but imbibe somewhat of history and origin, so that you are masters in your calling and can pursue your vocation with honor and profit.

I would not have you infer from what has been said that the study of materia medica is to be pursued to the neglect of chemistry, pharmacy or botany, rather to correct the impression which I know is apt to prevail, that this branch of a pharmaceutical education may be neglected so long as one is well posted in chemistry and pharmacy it will be all right. Such impression is far from correct, and can only lead to failure at a critical time, either now or in the future.

I have said nothing regarding the use of your time and opportunities while here, and do not deem it necessary. You have arrived at a period in life when you should begin to think for yourselves, and to appreciate that now is the time and opportunity to prepare for the future. You are now free from the many cares and perplexities of an active business life on your own account. What you engage in now you can devote your whole energies to, and with the same labor accomplish double what you can when there are other matters which must come in to employ part of your thought and time. Leisure time, spare moments are valuable. The old adage, "time is money," was never truer than to-day. To one who has any duty to perform, the way in which he spends his spare moments has much to do with reference to the fulfilling of that duty. What is the verdict of the public with reference to a doctor, lawyer or priest whose spare time is always spent in some frivolous manner? Does it not condemn such a course, and does not the course lead to failure? So here, look to your spare moments, they are golden opportunities flying quickly by; when gone, they never return, and no amount of future work can replace lost moments.

BILIARY CALCULI.¹

BY FRED L. LADUE, M.D., ALBURGH SPRINGS, VT.

(ALBANY MEDICAL COLLEGE, 1882.)

It is with considerable hesitation that I present the subject of biliary calculi to your notice, knowing full well that I am treading on thoroughly cultivated ground, and that any effort which does not proclaim a novel or untried treatment is very likely to be consigned to an ignominious oblivion; hence, this paper will deal only with a case in practice, with a brief *resumé* of the different forms of treatment which have been and now are fashionable.

Of all the varieties of stone formation occurring in the human economy, whether in the kidneys, urinary or gall bladder, none exhibit more interesting phenomena or appear in so many diversified forms as those having their origin in that diminutive but often troublesome organ, the gall bladder. Urinary calculi are often insidious in progress of formation, sometimes difficult to diagnose, and frequently dangerous to life, yet the difficulties in their diagnosis, and particularly in treatment, become insignificant when compared with the frequent difficulty in diagnosing gall stones and in deciding the oft-ventilated question of treatment, and more so when the possibilities and dangers of operative procedures are taken into consideration.

CAUSE.

The primary cause, of course, is abnormal bile. Either there is a hypersecretion of cholesterine or else the alkaline properties of the bile are deficient, rendering the bile unable to hold the crystalline cholesterine and the salts in solution. The remote causes are held to include a sedentary habit of life and a diet of rich and highly seasoned foods. The last named is such a prolific factor in the development of abdominal disease that I cannot refrain from quoting Sir Henry Thompson: "I have for some years past, however, been compelled by facts which are constantly before me to accept the conclusion that more mischief in the form of actual disease, of impaired vigor, and shortened life, occurs to civilized man, so far as I have observed in this country and throughout Western and Central Europe, from erroneous

¹ Read before the Vermont State Medical Society, at Montpelier, October 12, 1887.

habits in eating than from the habitual use of alcoholic drink, considerable as I know that to be." Shakespeare remarks:

"Strange it is
That Nature should compel us to lament
Our most persisted deeds."

No *age* has been spared the fatal infliction of obstructed bile ducts, from the eighth month of intra-uterine life to the ripe old age of the octogenarian. Even urinary calculi have been produced before development of the kidneys. Of the *sexes* the female is more liable to the development of biliary calculi, owing to their habits of life, their proneness to constipation and their barbarous custom of tight lacing.

DESCRIPTION.

A description of the different forms of calculi would be nearly endless. Suffice it to say that the color varies from white to black; the size, from a grain of sand to an egg; shape, round, square, octagonal and irregular; consistence usually soft if multiple, hard if single. They are composed of cholesterine, biliary pigment, mucus and salts. The majority are composed principally of cholesterine, which is a pure pearly white hydrocarbon, lighter than water, melts partly in boiling alcohol, losing one-fifth its weight.

HISTORY.

The ancient writers on medicine either failed to note their observations on this disease or else the trouble was extremely rare in the early centuries. While their works contain much about urinary calculi, and the subject is even included in the famous Hippocratic oath, the biliary calculus is entirely ignored, although its existence was doubtless known. The first written account of the subject was in 1565, when Johann Kentmann, of Dresden, communicated his discovery of gall-stones to Conrad Gesner, to be made use of in his great work on Fossils.

Vesalius and Fallopius, in 1643, examined and described them with great care so that Fernel and Glisson could, in the first extended account of them, give a complete description. Their chemical analysis followed some years later. Fourcroy, in 1785, examined them and called the cholesterine, adipocere, from its resemblance to the decomposition of the fatty part of the human body. From that time until the present, literature has accumulated until there seems no chance for any thing new hereafter.

The description of

A CASE

in practice will illustrate the subject better than any enumeration of symptoms, although the case is in some respects a rare one.

Mrs. F. G., aged forty-five, of sedentary habit and addicted to the use of rich and highly seasoned foods, was attacked in August, 1883, with an excruciating pain, extending from the nipple to the umbilicus, accompanied with severe and uncontrollable vomiting. This continued at intervals for ten days, being relieved only by morphia hypodermically and the hot water bath. On the tenth day she vomited seven concretions, which were regarded by Prof. Geo. W. Davis, of Kansas City, Mo., who was in town at the time, and by myself, as biliary calculi. In a few days a large mass of feces was expelled, in which were great numbers of the concretions, as if the patient had eaten largely of choke cherries without stoning. This colic, nausea and vomiting continued five weeks, during which time there was a localized peritonitis for a week. During these weeks there were daily rectal evacuations of a large number of calculi—so many that to count them were an impossibility. The pain gradually decreased, but the calculi made a regular weekly appearance, always preceded by a short, sharp attack of biliary colic. Again in April, 1884, she had a very severe attack, lasting at intervals for three weeks. The passage of stones now became comparatively easy, owing, doubtless, to the permanent dilatation of the cystic and common ducts. Nov. 17, 1884, I was called in the morning and found her suffering from a slight attack of pain. Before evening she vomited over one hundred concretions by actual count. These were pearly white, differing from all previous ones, which were yellow or brown. These were nearly the size of the first and exhibited facets. Subsequently, as usual, innumerable quantities passed per anum. Dec. 19, 1884, a mild attack began at midnight. At 6 A. M. the following morning she vomited one hundred and fifty white calculi. These weighed fourteen drachms, averaging six grains each. (A bottle containing one hundred of these vomited and one containing five hundred of those passing the bowels shown.)

The peculiarities of this case, which make it interesting, I will summarize. Premonitory symptoms, such as headache, nausea, vomiting, tenesmus, dyspnœa and palpitation occurred for two or three days previous to the attack. The vomiting of so many

stones, about three hundred and fifty in all, is the one salient point in the case.

That this mode of expulsion is rare, we have the authority of Frerichs. "In rare cases," he says, "calculi pass from the duodenum up into the stomach and are vomited. The vomited matter contains single or occasionally several, even as many as twenty concretions. This vomiting is preceded by severe and colicky pains." In this case the first ones vomited came up after a protracted period of retching; afterwards they always came up at the first vomiting spell. Ziemssen says: "Expulsion by vomiting is very rare. Two cases are cited by J. L. Petit, and eight cases have been collected by Dufresne. Jeaffreson saw one vomited by a woman aged ninety-four. In one case twenty were expelled." The calculi reach the stomach usually by regurgitation, but very large ones have chosen a fistulous route by the process of ulceration.

An immense quantity of slimy, ropy mucus accompanied the vomiting, usually about a quart. There was never any jaundice. The rapidity of formation, and the comparatively easy expulsion of the calculi in the later stages, are noteworthy. Without exaggeration, I am sure that the total number would reach far into the thousands. Dr. Shoemaker, of Philadelphia, counted 1,840 in one bladder, and Otto reports counting 7,802.

SOME PECULIAR CASES

are reported of the strange migrations of biliary calculi. They have been found no less than three times in the urinary bladder. Guterbock (Virchow's Archives) found one in the bladder of the female too large to have been introduced through the urethra. Liebreich examined it, and found it to be composed of cholesterine and biliary pigment, with a crust of uric acid. An autopsy disclosed the abnormality of a cord extending from the gall to the urinary bladder, a part of it being the remains of the fetal urachus.

While the causes for the production of gall stones have already been stated to lie in the food and the habits of life, mental influences are not wholly wanting as a causative power. In the case above described, I often observed an attack of colic to follow some mental conflict which the patient at various times was compelled by the force of circumstance to undergo. Sudden fear or other severe mental emotion has been known to arrest the flow of saliva and milk. Affections of the mind have interfered

with the glycogenic function of the liver, producing diabetes. Prolonged mental worry, anxiety, interfere with the secretion and elimination of the bile and the blood-change which so vitally concerns the liver and results in lithæmia. An impression on the brain appears to be reflected to the liver. Fothergill says: "Many observations have satisfied me that the extrusion of gall stones from the gall bladder, as well as their formation, may be traced to nervous agency." Dr. Budd wrote: "Another condition that seems to me to have great influence on the production of gall stones, or at least of biliary gravel, is mental anxiety or trouble." Then the disease itself, *a priori*, produces a foreboding that hastens the attacks. The patient is constantly burdened with the expectation of attack. A gloom hangs over the victim like the sword of Damocles, constantly threatening life.

THE PATHOLOGICAL RESULTS

of the presence of gall stones are easy to foresee. They may pass out and become expelled, leaving the track behind unmolested, with little or no damage done; may lodge in the ducts, and ulceration or perforation may ensue; or, a more favorable termination, by occluding the duct, remaining *in situ*, closing permanently the gall bladder and doing no further mischief; or by pressure on the walls of the bladder a catarrh is set up, atrophy, ulceration and perforation follow, resulting sometimes in an external fistula through which calculi are discharged. Murchison collected eighty-seven of these cases, some of whom recovered. Again, the ulcerative process sometimes produces an adhesion to the colon and a permanent communication is established between the bladder and intestine.

THE DIAGNOSIS

will always be, as it has ever been, an uncertainty, unless the disturbance is accompanied with the visible products of the disease. A great many attacks are called cases of gall-stones in which a stone is never seen, despite the fact that persistent sifting of the feces is resorted to. Unscrupulous practitioners frequently diagnose an obscure case of pain as one of gall-stones in order to retain the patient for prolonged treatment. One case came under my observation of a lady who has persistently eaten onions three times a day for thirty years because a traveling charlatan told her she would die from gall-stones unless she indulged unsparingly in this succulent vegetable. She never saw a gall-

stone and thinks none ever came away. The onion treatment was based on the story that a physician had an elegant penknife inlaid, not with precious stones in the ordinary accepted term, but with stones far more precious to the medical heart, gall-stones. The knife disappeared and was found some months later in a pile of decaying onions, the stones entirely dissolved. I cannot vouch for the authenticity of this historic legend.

Hepatic colic can be confounded with hepatalgia, enteralgia and gastralgia. These neuralgic affections, though not readily differentiated by location of pain, may be excluded by the appearance of calculi in the stools. A diagnosis has been made by the sensation of crepitation in the distended gall bladder.

SPECIFICS

for the prevention of biliary calculi have had their rise and fall, their time of popularity and their period of disuse. One generation discards what a succeeding one eagerly uses, and *vice versa*. At the present time there is a prevailing skepticism concerning any certain method of prophylaxis. Physicians and chemists have periodically loomed up above the common horizon of mediocrity with a wonderful solvent of cholesterine and have claimed great results from this medicine. But like the great search of old for the talismanic "Elixir of Life," these discoverers have had the fallibility of their powers demonstrated; not unlike the alchemists in the practice of their "divine art," who dreamed they had found the fountain of eternal youth, only to wake from their Utopian slumbers disappointed. Experience, with her ruthless hand, has swept the majority into oblivion. Only a general course of treatment founded on physiological principles and common sense has stood the test of time or produced any results. The majority of treatments vaunted to cure have been simply empirical; and the various schools of medicine are not much in advance of each other in producing a reliable and effective solvent. A prominent professor in a noted homœopathic school wrote me in relation to the subject: "We homœopaths simply prescribe for the patient as if he did not know that he had gall-stones. The knowledge of the fact cuts no figure in the treatment." They undoubtedly follow the sage advice given by the witty but sensible Josh Billings. He said: "If I was a doktor and understood my bizziness, I should doktor my pa-shunts and let the disease take care ov itself." But perhaps in this disease, as in many others, scientific treatment may gradu-

ally be evolved from empiricism, which may have proved the foundation stone for the ultimate building up of a stable and reliable treatment. "All true science," says Huxley, "begins with empiricism; though all true science is such, exactly in so far as it strives to pass out of the empirical stage into that of the deduction of empirical from more general truths."

Durande, 1792, began the use of his now well-known remedy, *ether* and *turpentine*. Cholesterine readily dissolves in these agents, hence their supposed therapeutic power. It has ever been a mooted question as to the efficacy of this mixture, some claiming wonders, but little short of the miraculous for it, but a large majority condemning it as worse than useless. While Durande ascribed its sole power for good to its ability to dissolve the concretions; others announce its action to be one of increased peristalsis, a *vis a tergo* by which the stone is propelled along the "strait and narrow road" to life intestinal. Frerichs says: "The best plan is to avoid the remedy altogether, because its solvent action is worth nothing, and as an antispasmodic it is surpassed by *morphia*." *Chloroform* has often been used for the same purpose, but the quantity necessary to effect solution is beyond the power of the system to endure.

Eichhorst has put forth a claim for *salicylic acid*, by means of which he states to have cured, in doses of seven grains continued for some time. He omits to explain its *modus operandi*.

A few years ago an enthusiastic physician proclaimed that the long-sought-for specific for biliary calculi has been found at last in *olive oil*. All that was necessary was to administer a sufficient quantity at night, and, like the appearance of manna to the hungry Israelites, the following morning hundreds of calculi would appear to feast the physician's eyes. It was also noticed that, nature being an exact banker, the returns were in just proportion to the investment—that the number of calculi were in direct correspondence to the amount of oil administered. The bubble burst. A reflecting physician submitted them to a careful analysis and found them to be concretions formed from the oil that had been taken. The popularity of this specific suddenly disappeared, but lately it has been resurrected from oblivion, and is now having an exacerbation of esteem. It is a waste of space to discuss the olive oil treatment further. Suffice it to say that olive oil has not the slightest power to soften or expel true calculi, but on the contrary is positively injurious and should be absolutely prohibited, as well as other fats and oils.

Dr. T. H. Buckler, of Baltimore, recommends the *hydrated succinate of the peroxide of iron*, and Bartholow the *phosphate of soda*.

Our grandfathers did not weary their brains wrestling with prophylactic, solvent or anti-solvent theories, but were ever ready with the nimble *lancet* and the omnipresent *tartar emetic* to treat these cases. These venerable *Æsculapians* would stand aghast if they could be permitted to read our current medical literature.

The *alkaline* treatment is next to the oldest in existence, and is founded on true physiological grounds. It has often been proved that the bile that produces biliary calculi has become acid in the gall bladder. Hence the efficacy of the alkaline treatment as a preventive. Harley has lent it the weight of his opinion, and says that the patient cannot get too much of it. The *acid* treatment is often used. The *alkaline mineral waters*, the Carlsbad and Vichy, are used in Europe extensively. The Sprudel salt is of great efficacy. Cattle, it is well known, are liable to have gall-stones when confined in stables, but a cure is effected when turned to grass; hence, Van Sweeten's absurd recommendation of *grass* for the human being.

Of the

SURGICAL TREATMENT

of biliary calculi, we will present only a brief and imperfect survey. *Cholecystotomy* is the term applied to the operation of opening the gall bladder for exploration and removal of diseased products, stitching the viscous to the abdominal wall and leaving a fistula. The operation was described by Sharp in the early part of the eighteenth century, and puncture was done with the trocar by Petit in 1743. Bartholow, according to Prof. Keen, was the first to aspirate the gall bladder. Thudichum, in 1859, proposed opening the gall bladder and crushing the calculus, and Maunder and Hughlings Jackson also proposed opening in appropriate cases; but it remained for the revered J. Marion Sims to revive the operation and place it on a footing in surgery. Up to 1886 the operation had been performed thirty-five times. Lawson Tait reports a case in which he crushed a stone in the common duct, the patient making a good recovery. In Sims' case, sixty stones were removed, but the patient died on the ninth day. Dr. George Brown (*British Medical Journal*) reports a recovery after an exploratory incision had been made

which failed to disclose the position of the gall bladder, though subsequent spontaneous discharge of bile occurred.

Langenbuch's operation for the complete removal of the organ, *cholecystectomy*, had up to 1886, been performed eight times, with twelve and a half per cent. fatal, while *cholecystotomy* has has a record of thirty per cent. fatal. *Cholecystectomy* can have but a limited range of applicability, especially if the stone obstructs the ductus communis, as it often does, a preliminary or subsequent lithotripsy would become imperative. Sir Spencer Wells operates by removing the contents of the gall bladder, sewing the incision with the continued suture, and returning the organ to its native home. Tait, as is habitual between him and Wells, condemns this operation.

In 1882, Dr. Winiwater performed a successful operation for occlusion of the cystic duct and attaching the gall bladder to the colon, thus establishing a permanent communication between the organ and the intestine. This is only taking advantage of one of nature's methods, and appears reasonable.

The question of surgical procedure, after it is decided upon, lies between *cholecystotomy* and *cholecystectomy*. Some have disputed the idea of any success being attained from a removal of the bladder, in fact claim that a continuance of life is incompatible with its absence. These disputants hold an exaggerated idea of the function of the gall bladder, which is merely a receptacle for the surplus hepatic secretion, and consequently occupies a position low down in the scale of physiological importance. Its office is one of convenience and not of necessity, and its closure does not disturb the secretion, elimination or disposal of the bile. Patients have experienced no inconvenience from a prolonged vicarious determination of bile, the clay stools persisting a long time. Again, the fact that over two-thirds of the cases operated upon for *cholecystectomy* have recovered, is of itself indisputable. Tait says that none of his patients suffered in any way when all the bile came through the fistula. Sims' and Tait's operations seem to hold out the best inducements at present.

In the surgery of the gall bladder future laurels will be won; and the time will come when the manipulation and removal of that organ will be as fearlessly undertaken, and as successfully performed, as ovariectomy is being performed at the present time.

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

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ALBANY MEDICAL ANNALS, NINTH YEAR.

The ALBANY MEDICAL ANNALS has been issued for eight years as the journal of the Medical Society of the County of Albany. The field which our contributors and subscribers represent has enlarged from year to year, and notably so within the last twelve months, especially among the alumni of the Albany Medical College in all parts of the United States. It has been decided to cease to claim to represent merely our county society. On November 30, it was voted by the medical society to discontinue the ANNALS with the issue of this December number.

On December 8, the ALBANY MEDICAL LIBRARY AND JOURNAL ASSOCIATION was formed, and the ALBANY MEDICAL ANNALS will be published in 1888 as the journal of that Association. The editing and publishing will continue in the hands of the same men who have been identified with the ANNALS since its inception in 1879.

The outlook for 1888 is brighter than at any previous time in the history of our publication. The price of subscription will remain one dollar a year, and preparations are making to provide our readers with a better dollar's worth in quantity and quality than heretofore.

ALBANY MEDICAL LIBRARY AND JOURNAL ASSOCIATION.

Pursuant to a statement made at the meeting of the county medical society, November 30, twenty-five physicians held a meeting in Alumni Hall, and organized the ALBANY MEDICAL LIBRARY AND JOURNAL ASSOCIATION. Dr. A. Vander Veer was called to the chair, and a constitution was read section by sec-

tion, and after various minor amendments, was unanimously adopted. A committee of three was elected to edit the **ALBANY MEDICAL ANNALS** and have charge of the library and funds. One of the committee is Editor-in-Chief, Secretary and Treasurer. The other two of the committee are Associate Editors. Every member of the Association is considered a collaborator in the editing of the **ANNALS**.

An annual meeting is to be held every December, when the committee is to report, and the election of the committee for the ensuing year is to be held. Other meetings will be called by the Secretary upon the request in writing of any five members. A chairman will be chosen at each meeting.

It is proposed to keep nearly all the medical journals, American and foreign, now published, and to add new medical books constantly. The Faculty of the Albany Medical College has permanently assigned a spacious room for the use of the Library Association.

All physicians who sign the roll before January 1, 1888, will be considered founders. It is desired to have this list as full as possible before its publication in January. The roll may be found at the office of Lorenzo Hale, M.D., Secretary and Treasurer, 194 Clinton avenue, Albany. Initiation fee is ten dollars, and annual due is ten dollars, which entitles each member to a key, giving access to the library at all times.

OBITUARY.

DR. JEPHTHA R. BOULWARE.

In the class in the Albany Medical College in 1857 my attention was particularly attracted to two students, by their mature age, their earnest attention and evident desire to learn, and especially by the shrewd questions which they frequently addressed to the various instructors in the college. I soon found that these two men were warm personal friends, that they had been in business together, that they were earnestly studying medicine, and were apparently determined to take full advantage of all the opportunities offered by the college for making themselves proficient in their chosen calling.

These two men were Henry L. Horton and Jephtha R. Boulware. They graduated in 1859. Dr. Horton settled in Morri-

saniam, in this state, and soon became a leading obstetrician in that section; he secured also a highly remunerative general practice, and acquired by his exertions a handsome fortune. He died in Italy, at Rome, two years ago.

Dr. Boulware remained in Albany. In a few years he became a leading surgeon. His general practice was extensive and profitable, and after having acquired a reasonable competency, he gradually withdrew from active practice, though he continued to treat some of his old patients until within a few weeks of his death, which took place October 17, from phthisis pulmonalis.

To gain a large and lucrative practice does not certainly indicate great professional attainments in a physician; he may or may not be well informed, but it usually shows a knowledge of human nature and a practical sagacity in taking advantage of opportunities—qualities in which the intellectually cultured are often lamentably deficient.

It seems to me that a more satisfactory test of the professional attainments of a person is the estimation in which he is regarded by his professional brothers. Subjected to this test, Dr. Boulware's reputation was an enviable one. He was highly regarded by physicians generally, and especially by those who were most intimate with him. Hence, we may say without any exaggeration that as a physician and surgeon Dr. Boulware deservedly stood high, and that his success was due not simply to his great practical sagacity, but largely to his professional knowledge and skill.

The newspapers of the day have given various items of Dr. Boulware's family and personal history, telling where he was born, relating incidents of his early life and struggles, referring to his marriage, his settlement in Albany, etc. Of such matters we need give no more details. Let us, however, refer to those elements of his character which ensured him success in his profession and the confidence of the community—which caused him to be respected during life and mourned after death.

During his preparatory course and in his earlier professional life, Dr. Boulware was a hard and close student of books, as well as of things. He seemed determined to know as much as could be of any subject that he studied. He strove to find out, if possible, whether the opinions that were expressed by authors were actually based on facts or whether they were mere hypotheses, brought forward as plausible explanations of what was practically unknown.

He was for several years connected with the medical department of the Albany County Alms House. The course that he pursued in that institution illustrates his mode of working. While there he made of each case under his care an elaborate record of the symptoms observed and his diagnosis. If death resulted, he made an autopsy, and recorded the pathological conditions found. By comparing the two records he learned for each case whether he had been correct or incorrect in his diagnosis. Faithfully pursuing this course, as he did in his public and private practice, he gradually became unusually accurate in diagnosis and prognosis, and acquired an amount of pathological knowledge that few possess. He made several hundred autopsies for private and legal purposes, and, besides the macroscopic observations, many cases were examined microscopically in more or less detail. The brain was for him a favorite study; he was thoroughly conversant with its anatomy, and was very ready in making of it a neat and thorough dissection.

Being earnest and persevering, being thorough and studying with honesty of purpose, he gradually acquired a large fund of medical knowledge, which was so thoroughly impressed on his mind that it was always ready to be used in the practical calls of his professional work. He had a thorough knowledge of anatomy and of mechanical principles, and these, combined with a ready manual dexterity and sound sense, made him a skillful and successful surgeon.

His knowledge of medicine and of surgical principles, his large and varied professional experience, his terse and forcible mode of expressing himself, made him, in the later years of his life, a medico-legal witness of unusual excellence. He was not infrequently highly complimented by the presiding judge at a trial for the ability and knowledge he had shown in the elucidation of a case.

Even a slight acquaintance with him showed that he possessed a practical sagacity, a ready adaptability of means to ends, and a knowledge of professional subjects that was by no means common. These qualities secured to him the entire confidence of his patients, while his thoughtfulness and consideration for the sick converted mere patients into personal friends, and caused him to be not only respected, but loved.

I have already alluded to his perseverance as a student. Perseverance was a marked element of his general character; it was

shown in various ways. For example, in early life and when he commenced his medical studies he was hesitant in his speech—he stammered and stuttered to a painful degree. Realizing how great an obstacle this fault of speech would be to his professional success, he strove persistently to conquer the difficulty. After some years of study and attention to it, he gained such a control of himself that there was scarce any hesitancy in his speech, and in later years he spoke with comparative fluency.

His perseverance, combined with his thorough knowledge of human nature, and his attention to details, made him an unpleasant antagonist; and, in various contests of one kind or another, his opponents, entrenched, it may be, in positions of influence and supported by those in power, found themselves utterly defeated when they had surely expected success.

That which impressed me early in my acquaintance with Dr. Boulware was his sincere respect for himself and his opinions. His opinions were not hastily formed, nor were they hastily modified. He had regard for authority if based on reason, but little for position, unless it was accompanied by qualities that commanded respect.

He was a man of strong feelings, which were based on strong convictions, and almost as a necessary consequence he was a decided partizan. He had a forcible way of supporting his opinions when they were called in question; he was apt in repartee and skillful in argument.

He was a modest and diffident man. I have often thought that his brusque manner and apparent indifference that were displayed at times, were the means that nature gave him for concealing his embarrassment arising from his constitutional timidity. When aroused, his timidity vanished.

A striking characteristic of Dr. Boulware was his supreme contempt for toadyism, professional or social. He was not a man to stoop for position or power; he heartily scorned those who fawned and flattered to attain their ends.

He was a sincere and loyal friend. He was always ready to advance the interests of his friends by an untiring expenditure of thought and labor in their behalf, that continued as long as the necessity existed. When adversity came to them, and others faltered, his energies were exerted for them more than ever.

He was charitable and generous, choosing his own time and methods to dispense his bounties. He was wisely careful for his

own interests, and in securing that which belonged to him, but he was always kindly considerate to the poor.

He was affectionate and warm hearted, but undemonstrative. He was correct in all the relations of life.

He is dead, but his memory will survive him as that of a conscientious physician, a loyal friend, and a true and honest man.

C. H. PORTER.

BOOK NOTICES.

ANATOMY, DESCRIPTIVE AND SURGICAL. By Henry Gray, F.R.S., Fellow of the Royal College of Surgeons; Lecturer on Anatomy at St. George's Hospital Medical School. The Drawings by H. V. Carter, M.D., Late Demonstrator of Anatomy at St. George's Hospital. With Additional Drawings in Later Editions. Edited by T. Pickering Pick, Surgeon to, and Lecturer on Surgery at, St. George's Hospital; Senior Surgeon, Victoria Hospital for Children; Member of the Court of Examiners, Royal College of Surgeons of England. A New American from the Eleventh English Edition. Thoroughly revised and Re-edited, with Additions by William W. Keen, M.D., Professor of Surgery in the Woman's Medical College of Pennsylvania; Professor of Artistic Anatomy in the Philadelphia School of Anatomy; Surgeon to St. Mary's Hospital; Fellow of the College of Physicians of Philadelphia, etc. To which is added Landmarks, Medical and Surgical. By Luther Holden F. R. C. S. With Additions by William W. Keen, M.D. Philadelphia: Lea Brothers & Co. 1887.

This is the first American edition of Gray's Anatomy entitled to consideration as something more than a mere reprint of the original. The revised English edition, exhibiting the excellent discrimination of its editor in bringing the text to date, easily maintains for the book its high place among works on this subject, and students of anatomy will be gratified to find that the errors which have persisted in recent editions have been carefully corrected. The chief interest in the issues of 1887 will attach to the parenthetical annotations of the American edition. The object of its editor has not been to increase the scope of the work, but rather to illustrate and vivify its statements, and this task he has successfully accomplished.

The introduction consists of an extract from a paper read by Dr. Keen at the International Medical Congress of 1881, arguing that the living model should be used as a means of demonstra-

tion in the lecture-room. As muscular tension is produced under exactly opposite conditions in life and death, the suggestion seems worthy of consideration, if it be desired to assist the student in external semeiology.

Especial attention has been given to the nervous system, numerous authentic works on this subject having, evidently, been consulted. Among the illustrations added to those of the English edition may be especially mentioned the two views of the head from which parts of the scalp and skull, respectively, have been removed from the "so-called motor region of the brain;" representations of a cast of the ventricles, of a vertical section of the brain, from Dalton, and of a horizontal section, from Flechsig. The substitution, for the cuts used in the original, of Ecker's universally adopted diagrams of the cortex is an excellent one. Several pages, profusely illustrated by diagrams, are devoted to localization in the cortical centres and the cerebral circulation. In both editions Sömmering's arrangement of the cranial nerves is preferred to that of Willis, and the twelve pairs are so numbered in the figures.

The statement, on page 362, that the fibres of the Sartorius muscle are "nearly two feet in length," is contradicted by the guarded assertion, on page 64, that individual muscular fibres do not extend, "it is said, farther than an inch and a half." Histologists are generally agreed that muscular fibres are short, though exception is made in the case of those of the Sartorius, which probably attain greater than the average length. It is to be hoped that Professor Gage, of Cornell University, whose researches in histology and microscopy are so favorably known, will soon announce the results of his study of this unsettled question.

Of the one hundred and thirty illustrations (not mentioned above) added to those of the English edition, the following are noticeable: the diagrams of the fifth and sympathetic nerves (accompanying the original cuts), and Gower's diagram "showing the Approximate Relation of the Spinal Nerves of the Various Motor, Sensory and Reflex Functions of the Cord;" sections made in various directions through the extremities, female pelvis and trunk; and ten figures from Von Ziemssen "showing the chief motor points at which an electrode should be applied in order to induce contraction of the various muscles."

The section on Development has been revised by Professor John A. Rider, of the University of Pennsylvania.

The mechanical execution of the book is good; a few typographical errors have crept in; of these a "serious inflammation" is the most alarming. All are atoned for by the press-work of the colored plates. The editor's objection to words derived from two languages, and his correction of some minor rhetorical errors, as, for instance, the cancellation of the superfluous preposition from the phrase "from whence," leave it to be regretted that the awkward expression "on to" should have escaped his eye. This is hardly ground for complaint; when such an extensive description has been accomplished without ambiguity, the reviewer who would attach importance to expressions calculated to irritate only the delicate sensorium of the philologist, might be justly accused of hypercriticism.

J. M. MOSHER.

DIFFERENTIAL DIAGNOSIS OF DISEASES OF THE SKIN. By Condict W. Cutler, M.D., of New York city. G. P. Putnam's Sons, publishers. 140 pages, 12mo. Price, \$1.25.

The plan of the book is similar to that of the "Differential Medical Diagnosis," by the same author, which we noticed not long since. After a classified list of skin diseases, there follows under each class an arrangement of the various diseases, against each of which is bracketed those diseases which present resemblances to it, and with which it is liable to be confounded. These are in turn taken up separately and the diagnostic features severally contrasted. These distinctions must in many cases be general, and not absolute. Still they appear to be carefully prepared and as exact, perhaps, as such tabulation of symptoms admits of, making a handbook which has its value. A similar plan of arranging the points of diagnosis commended itself to Dr. McCall Anderson in his recent work on Dermatology.

HISTORICAL SKETCH OF THE SENECA COUNTY MEDICAL SOCIETY, WITH SOME ACCOUNT OF ITS LIVING AND PIONEER MEMBERS.

This little volume was prepared and printed by resolution of the society. Its history is briefly given. Probably some form of society was effected about the time of the passage of the general law under which medical societies were formed in this state, in 1806, for there were a number of physicians in the then frontier county; of its early history, however, these are only scattered hints. It was not till 1865 that the society was

actively organized. But short space is, therefore, needed to outline the history of the society. The book is mostly taken up with biographies of the pioneer physicians and of the more recent members of the profession in the county. Biographical research involves much work, but it has its fascination to some; it certainly has value, not only as a contribution to history, but as a pious memento of the fathers of one's guild. The work has mainly been done for Seneca county by Dr. H. E. Allison, first assistant physician to Willard Asylum, which institution fills some pages of the book. A number of the past and present medical men of Seneca county received part or all of their medical instruction at the Albany Medical College. Humphrey C. Watson graduated there in the class of '42, and Landon Wells attended one course the same year; John Flickenger graduated in the class of '56, and Stephen P. Johnsen in '59. The present medical superintendent of Willard Asylum, Dr. P. M. Wise, attended lectures there in 1870, and Dr. Alexander Nellis, Jr., assistant physician, graduated in the class of '72. The volume contains sketches of about seventy-five physicians, and is an important contribution to the biographical literature of the profession.

F. C. C.

A HANDBOOK OF GENERAL AND OPERATIVE GYNECOLOGY. By Dr. A. Hegar, Univ. of Freiburg, and Dr. R. Kattenbach, Univ. of Giessen. In two volumes. Vol. II., Operations on the Tubes, Uterus, Broad Ligaments, Round Ligaments and Vagina, Operations in Urinary Fistulæ, Prolapse Operations, on the Vulva and Perineum. With 248 wood engravings. Being Vol. VII. of the "Cyclopædia of Obstetrics and Gynecology" (12 vols., price \$16.50), issued monthly during 1887. New York: William Wood & Company.

Admiration of this Cyclopædia increases as volume after volume appears. It is first-class material offered at lower than the heretofore lowest price.

DISEASES OF THE FEMALE MAMMARY GLANDS, by Th. Billroth, M.D., of Vienna, and **NEW GROWTHS OF THE UTERUS**, by A. Gusserow, M.D., of Berlin. Illustrated. These two works constitute Vol. IX. of "Cyclopædia of Obstetrics and Gynecology" (12 vols., price \$16.50), issued monthly during 1887. New York: William Wood & Company.

This volume is of especial value to the general practitioner. Either part of it will be worth, to many readers, more than the price of the whole. The one hundred and five large engravings will be an aid to every student.

CYCLOPÆDIA OF OBSTETRICS AND GYNECOLOGY. (12 vols., price \$16.50.) Vol. V., containing "Gynecological Diagnosis;" "General Gynecological Therapeutics," by R. Chrobak, M.D., Professor of Gynecology at the University of Vienna; and "Electricity in Gynecology and Obstetrics," by Egbert H. Grandin, M.D., Obstetric Surgeon to N. Y. Maternity Hospital. With 165 wood engravings. New York: William Wood

CYCLOPÆDIA OF OBSTETRICS AND GYNECOLOGY. Volume VIII., "Diseases of the Ovaries," by Dr. A. Olshausen, Professor of Obstetrics and Gynecology at the University of Halle. Thirty-six fine wood engravings. New York: William Wood & Company.

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These four volumes complete the remarkable series issued by William Wood & Company during the last twelve months. Each installment has presented new features which made it more acceptable than its predecessors. Subscribers to this Cyclopædia have been served better than they anticipated. The translation is rendered in smooth and easy-reading English, which makes the study of the books a recreation. The undergraduate, and the old practitioner as well, will find material adapted to their several requirements.

MASSAGE. Principles and Practice of Remedial Treatment by Imparted Motion. Mechanical Process. By George H. Taylor, M.D., 41 East 59th street, New York, author of "Health by Exercise," etc. 173 pages, 12mo, cloth, 75 cents. New York: John B. Alden, publisher.

No person can read this book without profit. "Mechanical massage is the transmission of motion, by means of suitable

apparatus, to any selected portion of the body, whereby the natural motions and functions are stimulated and carried forward to greater perfection." Common mechanical power, which is now everywhere attainable, can be applied to remedy the most difficult chronic diseases. Indigestion in its worst forms, including constipation, neuralgia and paralysis, rheumatism and joint affections, diseases of the kidneys, and all forms of enfeebled vitality are said to be relieved most remarkably by the author's application of mechanical vibration and massage.

THE DELUSION OF TONICS. By George H. Taylor, M.D., author of "Health for Women," etc. 23 pages, 12mo. New York: J. B. Alden, publisher.

This is a continuation of the Philosophy of Hygiene in the author's book on "Massage."

"No doubt almost any extent or kind of unease of feeling may be allayed, even suppressed, by certain drugs. But diminished sensibility thus secured is not a consequence of, or even compatible with, returning health. It is the result of interference with the process of nutrition, from which nervous power or energy arises; or with the connection of the nervous power with the consciousness."

A plea is made for mechanical massage to provide motor energy; under this treatment, nutrition and the capacity for voluntary power is said to rapidly return.

A MANUAL OF THE PHYSICAL DIAGNOSIS OF THORACIC DISEASES. By E. Darwin Hudson, Jr., A.M., M.D., late Professor of General Medicine and Diseases of the Chest in the New York Polyclinic; Physician to Bellevue Hospital, etc. One volume. Octavo 162 pages. Nearly 100 illustrations. Muslin. Price, \$1.50. New York: William Wood & Company.

Dr. Hudson suddenly died after his manuscript had been placed in the printer's hands.

The prominent points from the works of the best authorities are here collated, the writer's preferences are expressed, and the results of his own experience are added. Unnecessary words are avoided, and essential facts are so presented as to fix attention. In the tabular condensations, most valuable synopses are given. The book deserves most liberal patronage.

PERSONALS.

—Dr. Alexander Nellis, Jr. (A. M. C., '72), Assistant Physician, Willard Asylum for the Insane, issued, last summer, in pamphlet form, an address on "Insanity and its Treatment," delivered by him before the Seneca County Medical Society, on his retirement from the presidency of that body. The October issue of the *American Journal of Insanity* contained a report, by the same writer, of a clinical case of "Cerebral Atrophy with Subsequent Cystic Degeneration," illustrated by three diagrams showing the site of the lesion.

—Dr. Edward B. Atkins ('74) lately called on Albany friends on his way from his former home in Essex, N. Y., to Colorado, where he has moved on account, partly, of his health. His new address is No. 1947 Lincoln avenue, Denver, Colo. Dr. Atkins is possessed of no mean literary abilities, and is the author of a volume of poems entitled "Love's Tribute," which was noticed in the ANNALS some months ago. He leaves in the East the reputation of a thorough gentleman and an able physician of honorable professional character.

—Dr. M. M. Lowe ('77), surgeon of the Hudson River Ore and Iron Company, has resigned his position. He has gone to Findlay, Ohio, where he will establish himself as an eminent surgeon.

—Dr. Dayton L. Kathan ('86), late house physician and surgeon at the Albany Hospital, has established his office in Maxon block, Schenectady, N. Y.

—Dr. P. G. Cotter ('87), late senior house physician at St. Peter's Hospital, has accepted the position of resident physician at the government Indian school in Yuma, Arizona.

—William F. Teevan, F.R.C.S., recently attending surgeon for stone at St. Peter's, Berneers street, also at West London Hospital, London, and an able writer upon the subject of diseases of the bladder, died October 22, at Folkestone, from aortic insufficiency complicated with blindness and insanity. He was one of the first to write upon the subject of fracture of the inner table of the skull. By many American physicians, to whom he was ever very kind, he will be remembered with much gratitude.

—Dr. John Swinburne ('46), of Albany, has the sympathy of the community in the loss of his only son, Louis Judson Swinburne, who died suddenly at Colorado Springs, December 9, 1887, in his thirty-third year. The funeral was attended at All Saints' Cathedral, Albany, on Friday, December 16, at two o'clock.

—Dr. William H. Randel died at Albany, December 14, 1887, in his sixty-first year, having been born in Albany, August 28, 1827. He was stricken with paralysis the day previous to his death, while on professional duty at the house of a patient. His funeral was held at his late residence, No. 1 Clinton square, at two o'clock, December 17.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.

MINUTES OF SPECIAL MEETING TO TAKE ACTION ON THE DEATH OF JEPHTHA R. BOULWARE, M.D.

A special meeting was held October 19, 1887, at 4 P. M., to take action upon the death of Jephtha R. Boulware, M.D., who died October 17, 1887.

President Townsend in the chair. Present: Drs. Babcock, T. P. Bailey, William H. Bailey, Bendell, Bigelow, Blair, Boyd, Clark, Classen, Cook, Curtis, Dwyer, T. Featherstonhaugh, Freeman, H. Hun, La Moure, Mereness, Murphy, Papen Porter, Russell, Skillicorn, Starkweather, B. U. Steenberg, Ten Eyck, Thompson, Townsend, Trego, Ullman, Van Allen and Ward.

Called to order by the President, who stated the purpose of the meeting and said:

Dr. Boulware graduated from the Albany Medical College in 1859, and by his own untiring efforts gained both recognition and influence in his profession, to which, as yesterday's *Argus* says, "he was wedded with an unselfish devotion, and by an unostentatious benevolence to the poor and kindly sympathy with the suffering, he won the right to be named among those who 'do good by stealth and blush to find it fame.'"

Pleasure of the society asked.

Dr. C. H. PORTER said:

Mr. President—It would afford me gratification to present to this society my tribute to the memory of Dr. Boulware, but at this time I am unable to do so. It appears to me more appropriate and respectful to the deceased, as it is also, I believe, customary in such bodies as this when having sustained a similar loss, if the tributes to his memory be presented at a later date, when time has been given to those acquainted with him to prepare in suitable words their expressions of their loss.

Dr. PORTER offered the following resolution:

Resolved, That a committee of five be appointed by the chair to prepare an appropriate minute regarding the death of Dr. J. R. Boulware, and that their report be presented to the society at its next intervening meeting.

Seconded with a few remarks by Dr. W. H. Bailey. Carried.

The President appointed Drs. C. H. Porter, C. D. Mosher, S. H. Freeman, W. H. Bailey and H. R. Starkweather to act as such committee.

Dr. PORTER offered the following resolution:

Resolved, That the members of this society attend the funeral of Dr. Boulware, at his house to-morrow (Thursday), at two o'clock P. M.

Dr. T. P. BAILEY offered some suggestions as to meeting in a body to attend the funeral, to which Dr. Porter objected, because of the funeral being at the house.

Meeting adjourned.

T. F. C. VAN ALLEN, *Secretary*.

At the first intervening meeting, November 2, 1887, Dr. C. H. Porter, from the committee appointed to prepare a minute on the death of Dr. Boulware, made the following report:

Mr. President—Your committee appointed to present suitable expression of the society in relation to the death of Dr. J. R. Boulware, recommend the following to be entered upon the minutes:

We pause for a moment to eulogize the memory and worth of our late colleague and associate, Dr. J. R. Boulware. When we consider the lifedings of one whose record as a citizen and physician merited the respect and confidence of his fellow-men, it is with good reason that we as a society should desire to place on record our appreciation and respect for our departed brother and friend.

Dr. Boulware was a plain and unpretentious man, true to himself and loyal to his friends.

The manly qualities that adorned his character were liberally displayed in the earnestness of purpose, kindness of heart and exercise of charity that marked his career as a physician.

Energy, industry and determination were the weapons with which he conquered the adversities of life, and nobly he accomplished the work assigned to him, until Death commanded him to lay aside his armor.

As a member and officer of this society his record was clear and convincing. His ambition was to gratify those he served, and in the performance of his duties his sound sense and conservative views on all questions won for him the respect and esteem of his colleagues.

In every sense of the word he was a self-made man. Circumstances so shaped his career that his life to the full maturity of his manhood was a continual struggle to reach the goal of his ambition. How nobly he succeeded, and with what prudence and forethought he exercised the influence of his success, is best known to those who eagerly sought his counsel and were proud to name him as a friend.

As an upright citizen, a conscientious physician and a true man he will long continue to be held in grateful remembrance.

[For Dr. Porter's tribute to the memory of Dr. Boulware, presented at this meeting, see page 383.]

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Lactose (Milk Sugar).....	25.00
Malto-diasase.....	15.00
Soluble Carbo-hydrates.....	41.67
Gluten and Soluble Albuminoids.....	16.35
Potassium Bicarb.....	1.25
Phosphates.....	.25
Sodium Chloride and other Salts.....	.48

100.00

**It is a Cooked Food,
 A Predigested Food,
 A Non-Irritating Food.**

An important consideration is its low price, it
 being much more economical than other foods. We
 make four sizes, selling for 25 cents, 50 cents, \$1.00
 and \$2.50. A dollar can will furnish one hundred
 and fifty meals for an infant.

SEND FOR SAMPLE!

If any physician who has not yet made a trial of
 the Lactated Food will write us, we will send a
 package of our regular size, post-paid, without
 charge, with the understanding that it will be given
 a careful trial as soon as possible.

WELLS, RICHARDSON & CO.
 BURLINGTON, VT.

FOR CONSUMPTION AND WASTING DISEASES

HYDROLEINE

(HYDRATED OIL)

Produces Immediate Increase in Flesh and Weight.**FORMULA.**

Each Dose of Two Teaspoonfuls equal to 120 Drops, contains :

Pure Cod Liver Oil, 80 m. (drops)	Soda	1-3 Grains.
Distilled Water.....35 "	Salicylic Acid.....	1-4 "
Soluble Pancreatin. 5 Grains.	Hyochoic Acid.....	1-20 "

DOSE.—Two Teaspoonfuls alone, or with twice the quantity of water, to be taken thrice daily after meals.

HYDROLEINE (Hydrated Oil) is not a simple alkaline emulsion of oleum morrhua, but a hydro-pancreated preparation, containing acids and a modicum of soda. Pancreatin is the digestive principle of fatty foods, and in the soluble form here used, completely saponifies the oleaginous material so necessary to the reparative process in all wasting diseases.

Lautenbach's researches on the functions of the liver would show the beautiful adjustment of therapeutics in preparation of Hydroleine, furnishing, as it does, the acid and soda necessary to prevent self-poisoning by re-absorption of morbid tubercular detritus, and purulent matters into the general circulation.

Each bottle in nutritive value exceeds ten times the same bulk of cod liver oil. It is economical in use and certain in results.

The principles upon which this discovery is based have been described in a treatise on "The Digestion and Assimilation of Fats in the Human Body," by H. C. BARTLETT, Ph. D., F. C. S., and the experiments which were made, together with cases illustrating the effect of Hydrated Oil in practice, are concisely stated in a treatise on "Consumption and Wasting Diseases," by G. OVEREND DREWRY, M. D.

COPIES OF THESE WORKS SENT FREE ON APPLICATION.

Sold at all Drug Stores, at \$1.00 per Bottle.**C. N. CRITTENTON,**

SOLE AGENT FOR THE UNITED STATES.

115 FULTON STREET, N. Y.

A Sample of Hydroleine will be sent free upon application, to any physician (enclosing business card) in the United States.

Please MENTION THIS JOURNAL.

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Is the only infants' Food manufactured that perfectly nourishes the child without the addition of cow's milk. We do not except the so-called milk Foods, for they contain but a *very small percentage* of the solid constituents of cow's milk. Most of the credit given to prepared foods belongs to cow's milk, which must be added to them or the child would starve.

Carnrick's Soluble Food is composed of about equal proportions of the solid constituents of cow's milk, partially digested, and wheat flour, the starch of which is converted into dextrine and soluble starch.

Thomas H. Rotch, M.D., Instructor in Diseases of Children, Medical Department of Harvard University, in the Boston Med. and Surgical Journal, Sept. 29, 1887, says: "Cow's milk is the universal menstruum of infant Foods all over the world, and is the actual food which the infant is getting; hence it is irrational and unfair to speak of and give the credit to the various artificial foods, when we really should speak of cow's milk, with its modification to a greater or less degree by certain adjuvants under the name of infant Foods, which all supply about the same variety of ingredients in common; such small amounts of these ingredients as to be of little benefit in nourishing the infant, and would not nourish it unless aided by cow's milk."

CARNRICK'S SOLUBLE FOOD

is positively the only Infants' Food manufactured to which the foregoing criticisms do not apply.

BEEF PEPTONOIDS.

(Concentrated Beef and Milk with Gluten.)

Is the most concentrated and easily digested nutrient that has ever been introduced to the medical profession. Beef Peptonoids in the form of a powder is not a pure peptone, only one-fourth being digested. We are confident that you will find Beef Peptonoids in all cases where you desire a concentrated and easily digested food superior to any preparation in the market, or that can be prepared in the household.

The following are the opinions of most eminent authorities in the world:

Prof. Atfield says of Beef Peptonoids: "It is by far the most nutritious and concentrated Food I have ever met with."

Prof. Stutzer says: "When the formation of flesh and blood is to be promoted and vigor infused into a patient, Beef Peptonoids for this purpose stands first and foremost amongst all the preparations I have examined."

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Is presented in the form of an elegant Cordial, containing twenty per cent. of spirits. Its nutritive constituents are wholly digested. It will agree with patients who reject all other foods.

PEPTONIZED COD LIVER OIL AND MILK

IS SUPERIOR TO OTHER PREPARATIONS OF COD LIVER OIL:

Because the *division of the oil globules is from twenty to one hundred times finer than any other preparation of Cod Liver Oil ever produced, and consequently brought nearer the condition required for assimilation.*

It is predigested, and is, therefore, more easily retained by weak and enfeebled stomachs, and eructations are less liable to follow.

Samples sent on application by

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NERVE-TONIC, STIMULANT AND ANTISPASMODIC.

FORMULA.—Every Fluid-Drachm represents FIVE grains EACH — Celery, Coca, Kola, Viburnum and Aromatics.

INDICATIONS.—Impotency, Spermatorrhœa, Loss of Nerve-Power (so usual with Lawyers, Preachers, Writers and Business Men), Nervous Headache, Neuralgia, Paralysis, Dysmenorrhœa, Hysteria, Opium-Habit, Inebriety, Prostatitis, Dyspepsia, and ALL LANGUID or DEBILITATED conditions of the System.—*Indispensable to restore a patient after alcoholic excess.*

DOSE.—One or two teaspoonfuls three or more times a day, as directed by the Physician.

ALETIS CORDIAL

UTERINE TONIC AND RESTORATIVE.

PREPARED FROM THE ALETIS FARINOSA OR TRUE UNICORN.

INDICATIONS.—Amenorrhœa, Dysmenorrhœa, Leucorrhœa, Prolapsus Uteri, Sterility, to PREVENT Miscarriage, etc.

DOSE.—One teaspoonful three or four times a day.

Unrivalled as a Uterine Tonic in Irregular, Painful, Suppressed or Excessive Menstruation
IT RESTORES NORMAL ACTION TO THE UTERUS, AND IMPARTS VIGOR TO
THE ENTIRE UTERINE SYSTEM.

Where Women have aborted during previous Pregnancies, or in any case where abortion is feared, the Aletris Cordial is indicated, and should be continuously administered during entire gestation.

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A MILD, SAFE AND PLEASANT APERIENT.

Prepared from Manna, Purified Cathartic Acid, and Fruit Juices.

INDICATIONS.—Constipation, Biliousness, Congestions, Etc. **INDISPENSABLE AS AN APERIENT FOR WOMEN DURING PREGNANCY.** In teaspoonful doses, 3 times a day, it favors the SECRETION and EXCRETION of bile, and gradually removes the congested and torpid states of the liver, and keeps the bowels in a regular and soluble condition.

DOSE.—ONE or MORE teaspoonfuls as directed by the Physician.

S. H. KENNEDY'S
CONCENTRATED EXTRACT OF
PINUS CANADENSIS
DARK A NON-ALCOHOLIC LIQUID. **WHITE**

A MOST VALUABLE NON-IRRITATING MUCOUS ASTRINGENT.

INDICATIONS.—Albuminuria, Diarrhœa, Dysentery, Night-Sweats, Hemorrhages, Profuse Expectoration, Catarrh, Sore Throat, Leucorrhœa, and other Vaginal Diseases, Piles, Sores, Ulcers, Burns, Scalds, Gonorrhœa, Gleet, Etc.

When Used as an Injection, to Avoid Staining of Linen, the WHITE Pinus should be Used.

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